

MEMORANDUM: America Recycles Week Briefing

TO: Administrator Andrew Wheeler

FROM: Peter Wright, Assistant Administrator for OLEM

DATE: October 23, 2019

SUMMARY: This memo transmits briefing materials for America Recycles Week, which is November 11 – 15, 2019. Specifically, EPA is leading three events during the week: an Innovation Fair on November 14, an Executive Leadership Roundtable on November 15, and the 2019 America Recycles Summit, also on November 15.

OBJECTIVE: OLEM will provide an overview of the activities and seeks the Administrator's feedback on the events and participation confirmation.

ATTACHMENTS: Overview of the EPA-led events
Overview of the weekly events
Summary of the national framework

OVERVIEW OF EPA-LED EVENTS

America Recycles Week

Overview of America Recycles Week Activities and Administrator Run-of-Show



- **Background:** EPA and the America Recycles Network, comprised of stakeholders from across the recycling value chain, have planned a series of activities November 11th – 15th. EPA Headquarters plans to lead three events during the week including: the Innovation Fair, Executive Leadership Roundtable, and 2019 America Recycles Summit.
- **Objective:** Provide high-level overview of all activities EPA Headquarters is leading during America Recycles Week and outline the specific activities and roles for the Administrator.

Innovation Fair

- **Date:** Thursday, November 14th, 1:00pm – 6:00pm
- **Background:** The first-ever America Recycles: Innovation Fair will connect potential investors to recycling innovators to spur market development and adoption of new technologies as well as products comprised of recycled content. 35-40 exhibitors will showcase their innovative efforts across the recycling system, including research, education and outreach, new technologies and processes, and recycled content products. The Fair also will feature a brief awards presentation by the National Waste and Recycling Association (NWRA), which will be presenting Challenge Coins to 5-6 veterans. Administrator Wheeler is invited to deliver brief welcome remarks, participate in the awards ceremony, and take photos with the NWRA leadership and the veterans. The Institute of Scrap Recycling industries (ISRI), the Solid Waste Association of North America (SWANA), the Recycling Partnership (TRP) and Keep America Beautiful (KAB) are co-sponsoring the Innovation Fair with EPA.
- **Objective:** Provide Administrator Wheeler with an overview of the Innovation Fair. Confirm Administrator participation in Innovation Fair, including preferred timing of the 30-40- minute awards event and welcome remarks (between 1:00pm – 4:00pm).

Executive Leadership Roundtable

- **Date:** Friday, November 15th, 8:00am – 9:30am
- **Background:** The EPA Administrator will host approximately 30-40 senior executives from across the recycling industry. The closed event will provide a more intimate setting for the leaders to discuss how to build on the efforts initiated in 2019 and continue working together to implement the *National Framework to Advance the U.S. Recycling System*, which will be released that day. The roundtable also will provide an opportunity to recognize charter members of the Recycling Demand Challenge, a new initiative within EPA's WasteWise program that will focus on increasing demand for recycled content products.

- **Objective:** OLEM seeks the Administrator's feedback as we finalize planning for this event. Specifically, would the Administrator prefer the discussion be facilitated by a moderator, and that 3-5 "discussion starters" be identified in advance to initiate the conversation? Or is the preference to have a more free-flowing conversation?

America Recycles Summit

- **Date:** Thursday, November 14th, 10:00am -1:00pm
- **Background:** Last year on November 15, 2018, EPA hosted the America Recycles Day Summit. That day, 45 signatories, including EPA, pledged to work together to address challenges facing the U.S. recycling system. This year, EPA will again host a summit on November 15, the 2019 America Recycles Summit, and bring together stakeholders from across the recycling system to discuss progress made over the last year and identify additional commitments or actions they will take to improve domestic recycling.
- **Objective:** Provide the Administrator with an overview of the event.

EPA Regional Events/Activities for America Recycles Week

- **Background:** EPA Regions are planning events across the country to celebrate America Recycles Week.
- **Objective:** Provide the Administrator with an overview of planned events.



America Recycles Week 2019

"Charting a Collaborative Path Forward to a More Resilient Recycling System"

Overview of EPA-led Events and Administrator Run-of-Show

October 24, 2019

Background

Last year on November 15, 2018, EPA hosted the America Recycles Day Summit that brought together stakeholders from across the recycling system to join EPA in signing the America Recycles Pledge. That day, 45 signatories, including EPA, pledged to work together to identify specific actions to take in addressing challenges and opportunities facing the U.S. recycling system. Since hosting the Summit, EPA has coordinated the efforts of four workgroups charged with addressing challenges in the recycling system across the four action areas identified last year: Promote Education and Outreach, Enhance Materials Management Infrastructure, Strengthen Secondary Material Markets, and Enhance Measurement. Today, a total of over 145 organizations have signed the pledge.

America Recycles Week

EPA and the America Recycles Network stakeholders are planning an entire week of activities this November 11th – 15th, with each day featuring a different communications theme as highlighted below.

- **Monday (11/11): *Veterans, Jobs, and Recycling*** - Veterans make a positive contribution to the U.S. economy including through the recycling industry. The recycling industry also creates jobs.
- **Tuesday (11/12): *Measurement*** – Improving data, metrics and measurement is key to strengthening the U.S. recycling system. EPA also will be celebrating the 25th anniversary of EPA's WasteWise voluntary partnership program, which encourages organizations and businesses to achieve sustainability in their practices and reduce waste through setting goals and reporting progress.
- **Wednesday (11/13): *Markets and Market Development***- Enhancing markets for secondary materials will help keep high-quality materials in the U.S. economy.
- **Thursday (11/14): *Education and Outreach*** - Promoting education and outreach to consumers on how to recycle properly helps reduce contamination in the recycling stream and create high-quality recycled products.
- **Friday (11/15): *America Recycles Day: Collaboration is Key to Success*** – Collaboration is key to finding solutions to the challenges facing the U.S. recycling system.

EPA plans to lead three events during America Recycles Week:

- An Innovation Fair to be held Thursday, November 14th (open to the press and public) from 1:00pm – 6:00pm.
- An invitation-only executive-level roundtable dialogue with Administrator Wheeler the morning of Friday, November 15th (closed to the press), from 8:00am – 9:30am.
- The 2019 America Recycles Summit, taking place later in the day on Friday, November 15th (open to the press, America Recycles pledge signatories, and special invited guests) from 10:00am -1:00pm.

America Recycles: Innovation Fair

The America Recycles: Innovation Fair will connect potential investors to recycling innovators to spur market development and adoption of new technologies as well as products comprised of recycled content. Exhibitors will showcase their innovative efforts across the recycling system, including research, education and outreach, new technologies and processes, and recycled content products. The Fair will take place on November 14th from 1:00pm – 6:00pm in the Ronald Reagan Building Pavillion Room and is open to the press and the public.

During the Innovation Fair (time TBD, pending Administrator availability), the National Waste and Recycling Association will be conducting a brief ceremony recognizing veterans for their service and commitment to environmental protection by presenting several with Challenge Coins. During the last two hours of the Innovation Fair, from 4:00pm – 6:00pm, Keep America Beautiful will be sponsoring a reception in the Ronald Reagan Building Pavilion Foyer.

Administrator Role: Administrator Wheeler will deliver welcome remarks during the Fair’s open hours and have an opportunity to visit the exhibit booths. Administrator Wheeler will deliver remarks and present the Challenge Coins to the veterans NWRA has invited. Administrator Wheeler also is welcome to attend the Innovation Fair and Summit reception, sponsored by Keep America Beautiful.

Executive Leadership Roundtable

On Friday, November 15, 2019, from 8:00am – 9:30am, at EPA Headquarters in Washington, DC, Administrator Wheeler will host approximately 30 senior executives from across the recycling system. Through their participation, leaders will commit to continue working together over the next year to implement a national framework for advancing the U.S. recycling system, including building on efforts initiated in 2019 and launching new efforts, such as developing a national goal to increase recycling.

Administrator Role: Administrator Wheeler will make opening remarks. Administrator Wheeler also will recognize charter participants in EPA’s new WasteWise Recycling Demand Challenge through a photo with charter members.

2019 America Recycles Summit

Following the Roundtable on Friday, November 15, 2019, from 10:00 am – 1:00 pm, Administrator Wheeler will host America Recycles Pledge signatories in EPA’s 2019 Recycling Summit. The Summit is open to the press but not open to the public; invitees are limited to America Recycles Pledge signatories as well as any special guests invited by EPA leadership. During the Summit, EPA will introduce charter members of the new Recycling Demand Challenge, workgroup leaders will present on their accomplishments and deliverables, and participants will have an opportunity to identify additional commitments or actions they will take to improve domestic recycling. OLEM will be moderating a panel of executive leaders from across the recycling value chain regarding future actions and what more is needed to advance the recycling system.

Administrator Role: Administrator Wheeler delivers opening remarks and is welcome to attend to listen to the workgroup members’ presentations and OLEM-moderated executive panel discussion.

The National Framework for Advancing the U.S. Recycling System

During the Summit, EPA will announce the release of its *National Framework for Advancing the U.S. Recycling System*. The Framework will build on the status report released in July 2019 and will highlight the work completed by the America Recycles partnering organizations as well as partnership activities completed by America Recycles Pledge signatories. The Framework is intended to highlight collaborative efforts made by EPA and others to improve the resilience of the U.S. recycling system as well as identify areas for future action.

Recycling Demand Challenge Summary

EPA is launching a *Recycling Demand Challenge* within WasteWise to help strengthen and increase domestic demand for recyclables, stimulate North American markets for materials collected through recycling programs, encourage sustainable management of collected materials, and mitigate reliance on export markets.

Any organization that buys or manufactures products can participate in the Recycling Demand Challenge. Participants in the challenge will set goals to increase the recycled-content in the products they manufacture or purchase.

Summary of Administrator Wheeler Participation

Event	Anticipated Time	Notes
Innovation Fair 11/14/19 1:00pm – 6:00pm	We propose Administrator Wheeler blocks off 1-2 hours between 1:00pm and 4:00pm to: deliver welcome remarks, participate in the National Waste and Recycling Association's presentation of Challenge Coins to 5-6 veterans, and view and interact with the exhibitors.	Please advise as to the preferred time for the Administrator to: 1) participate in the NWRA event and 2) deliver welcome remarks to the Innovation Fair attendees.
Innovation Fair and Summit Welcome Reception 11/14/19 4:00pm – 6:00pm	4:00pm – 6:00pm	Keep America Beautiful is sponsoring a reception for attendees of the Innovation Fair and Summit in the Ronald Reagan Building. The Administrator is welcome to attend the reception.
CEO/Leadership Roundtable 11/15/19 8:00am – 9:30am	8:00am – 8:30am	Networking; coffee and light refreshments. Informal conversation with attendees.
	8:25am – 8:30am	Administrator joins Roundtable participants for informal conversation prior to start of roundtable
	8:30am – 8:35am	Administrator delivers welcome remarks and announces charter members of EPA's new Recycling Demand Challenge, including major brands.
	8:35am – 9:25am	Facilitated discussion with Roundtable participants.
	9:25am – 9:30am	Photo opportunity with WasteWise Recycling Demand Challenge charter participants.
Transition to America Recycles Summit	9:30am – 10:00am	Transition from Green Room to Map Room.
America Recycles Summit 11/15/19 10:00am – 1:00pm	10:00am – 10:15am	OLEM AA Peter Wright welcomes and introduces Administrator Wheeler.
	10:15am – 10:25am	Administrator Wheeler delivers opening remarks.
	10:25am – 1:00pm	Administrator Wheeler is welcome to attend to listen to the workgroup members' presentations and OLEM-moderated executive panel discussion.



Additional Details: Innovation Fair, Roundtable and Summit

October 24, 2019

Innovation Fair

Time: Thursday, November 14th from 1:00pm – 6:00pm.

Location: Pavilion Room in Ronald Reagan Building.

Registration Link: Please register to attend the Innovation Fair and share the opportunity with others. The Innovation Fair is open to the public but registration is requested at:
<https://americarecyclesinnovationfair.eventbrite.com>.

Press Details: Open to the press and public.

Objective: Connect potential investors to recycling innovators to spur market development and adoption of new technologies as well as products comprised of recycled content. Participants will showcase their innovative efforts across the recycling system, including research, education and outreach, new technologies and processes, and recycled content products.

Co-Sponsors: Institute of Scrap Recycling Industries (ISRI), Keep America Beautiful (KAB), Solid Waste Association of North America (SWANA) and The Recycling Partnership (TRP)

Participants:

1. Innovators (research entities, entities advancing recycling via technology and organizations using recycled materials in products)
2. Potential investors (foundations, venture capitalists, federal partners (Small Business Innovation Research, Department of Energy), angel investors, corporations, local governments)
3. America Recycles pledge signers (100+ organizations)
4. General public
5. Press
6. Congressional representatives

Format: The Innovation Fair will consist of a series of booths. Each innovator will have a booth to convey information on their innovation. Attendees (funding entities, pledge signers, and other targeted entities) will explore the booths and speak with the exhibitors. We anticipate the Administrator would like to attend a portion of the Innovation Fair. His role could include a speaking opportunity or walking around visiting booths. In addition to viewing the booths, the Administrator will be providing brief remarks during the Challenge Coin Presentation, described below.

Challenge Coin Presentation: The National Waste and Recycling Association (NWRA) will be presenting challenge coins to 5-6 veterans during the Innovation Fair. Challenge coins are a military tradition, often collected by law enforcement and military personnel. The challenge coins were developed to instill pride, reward excellence and recognize contributions. It is in this spirit that NWRA would present challenge coins to employees in the recycling industry that served the United States with great honor and distinction. EPA Administrator Wheeler will deliver brief welcome remarks and participate in the presentation of the coins, as well as photos with the veterans and the NWRA Board and President at the conclusion of the event.

Synergies: We anticipate some attendees from the U.S. Chamber of Commerce's Corporate Citizenship Conference may attend the Innovation Fair. The participants in this conference typically include executives or senior sustainability officers from major businesses and corporations whose corporate social responsibility commitments can include making positive contributions to the environment. The Corporate Citizenship Conference, which takes place annually, will be held in the Ronald Reagan Building from November 13-14.

Next Steps: EPA is working with the America Recycles Week Planning Committee to:

- Finalize exhibitors (Week of 10/21)
- Continue to advertise the event to the public and potential investors.

Executive Leadership Roundtable

Time: Friday, November 15th from 8:30am – 9:30am. An optional “meet and greet” will begin at 8:00am. Request guests to arrive by 7:45am to clear security. Light refreshments will be served.

Location: EPA's Green Room.

Press/Details:

- Closed to the press.

Objectives:

- Executives from industry, federal, state, tribal, and local government, and trade associations will commit to continue working together over the next 1-2 years to build on their successes and implement a national framework for advancing the U.S. recycling system, including developing a national goal to increase recycling.
- EPA Administrator Wheeler will recognize the charter participants of the new WasteWise Recycling Demand Challenge. Charter participants will announce their commitment to buy recycled materials and to manufacture recycled and recyclable products to advance the U.S. recycling system.

Participants: EPA Administrator along with ~30-40 CEOs/President/Cabinet-level executives from businesses, government associations, industry associations, local governments, non-profit organizations. Major investors (e.g., Citibank) that invest heavily domestically and the U.S. Chamber of Commerce have been invited to the Roundtable as investments in recycling infrastructure are essential in achieving high-quality recycled materials.

Format: The Roundtable is currently envisioned to be an informal event, with the America Recycles Summit being structured as a more formal conference-style event.

8:00 am – Coffee and light refreshments (30 minutes)

8:35am – Administrator Wheeler provides opening remarks (5 minutes)

8:40am – CEOs/Executives highlight their successes to the challenges they are facing; share ideas on what EPA and other stakeholders can do to build on workgroup actions from 2019 to further improve recycling; and announce commitments to support the national framework for advancing the U.S. recycling system (20 minutes)

9:00am – Moderated discussion among participants (25 minutes)

9:25am – Group photo (5 minutes)

9:30am – Transition to Summit

Preliminary key messages for Administrator Wheeler:

- Congratulations on the tremendous progress made over the last year. Collaboration across the supply chain has been critical to the success of our America Recycles efforts to date.
- EPA is pleased to announce the release of the framework for advancing the U.S. recycling system. Please join me in making a commitment to implement this plan.
- Key activities over the next year will include building on our successes to work together to develop a national goal to increase recycling. I recognize it will be a challenge to set such a goal and I know each of your organizations will bring valuable expertise and experience to the table.
- We also are excited to announce the launch of the Recycling Demand Challenge program.
- Thank you for being leaders in the recycling industry.
- I am looking forward to hearing from you regarding your successes and any challenges you continue to face, how you see your organization contributing to implementing the national framework, and what other actions you would like the federal government to take to further advance recycling in the U.S.

Questions:

Contact Mya Sjogren (sjogren.mya@epa.gov) or Suzie Boxman (boxman.suzanne@epa.gov).

2019 America Recycles Summit

Executives from industry, federal, state, tribal, and local government, and trade associations will commit to continue working together over the next year to build on their successes and implement a national framework for advancing the U.S. recycling system, including establishing a national goal to increase recycling.

Time: Friday, November 15th ~10:00am – 1:00pm. Participants will be asked to arrive 1 hour early to clear security.

Location: Map Room (WJC East Rm 1153).

Press Details: Open to press

Objectives:

- Introduce charter members of the new WasteWise Recycling Demand Challenge.
- Celebrate America Recycles workgroup accomplishments and deliverables.
- Make a public commitment to work together on the actions identified in the *Framework to Advance the U.S. Recycling System*.
- Exchange ideas on any additional actions that are needed to improve recycling in America.
- Inspire further action by attendees in improving recycling. Actions could include joining workgroups and identifying additional commitments they will take to improve recycling.

Participants: 100-200 organizations including the America Recycles Day pledge signers and the America Recycles Workgroup members.

Proposed Format:

9:30am – Light refreshments (e.g. coffee, tea)

10:10am – Welcome and introduction of Administrator Wheeler by OLEM Assistant Administrator Peter Wright

10:15am – Opening remarks from Administrator Wheeler

- Thank workgroup participants.
- Provide highlights from the morning Roundtable.
- Announce release of *National Framework to Advance the U.S. Recycling System*.
- Announce WasteWise 25th anniversary.
- Announce launch of the new “Recycling Demand Challenge” within WasteWise and recognize the Charter participants (official launch will have occurred at Roundtable, this will just be announcing to the larger group).
- Acknowledge that there are other events going on across the country in celebration of America Recycles Week.

10:25am – Importance of the regional perspective in advancing recycling – brief remarks from Region 2 Administrator Pete Lopez.

10:35am – America Recycles Network Accomplishments and Future Actions. Each presentation will focus on key products/deliverables and be forward-looking, highlighting plans for projects in 2020 and beyond.

- Overview of America Recycles efforts and progress since the 2018 Summit (EPA)
- Presentation of key deliverables and next steps/future actions
 - Recycling definition and Recycling System Map (EPA and Environmental Research and Education Foundation)
 - Additional/future measurement-related actions
 - Key messages and info-graphic (KAB, TRP, SPC)
 - Additional/future education and outreach actions
 - Launch of Recycling Demand Challenge (EPA, Waste Management, TRP)
 - Additional/future market development actions
 - Launch of the Virtual Clearinghouse (Chamber of Commerce Foundation, ISRI, KAB)
- Potentially 2-4 additional announcements (TBD)
 - Include one or more announcements about other events going on around the country
 - Opportunity for other partners to announce items (e.g. KAB highlights on town hall meetings)

11:35am – Facilitated panel discussion. EPA-moderated panel discussion with senior leaders from across the supply chain (our America Recycles steering committee member organizations). Looking to the future - what additional actions are needed? What are the gaps, and how can current pledge signers who have not joined the workgroups get involved? The audience will be engaged through a virtual polling app such as “Poll Everywhere” and/or Sli.do.

12:15pm – Questions through Facebook Live. Take a limited number of additional questions from the audience and through Facebook Live.

12:45pm – Closing remarks from Assistant Administrator Peter Wright. Summarize key commitments and highlight proposed actions. Reiterate specific requests for the audience (i.e. to join a workgroup, join Recycling Demand Challenge). Invite recent pledge signers to join workgroups.

1:00pm – Adjourn and Networking

America Recycles Roundtable Invitees
Last Updated: 10/21/2019

Background on the America Recycles Roundtable:

Time: Friday, November 15th from 8:00am – 9:30am. An optional “meet and greet” will begin at 8:00am. Request guests to arrive by 7:45am to clear security. Light refreshments will be served.

Location: EPA’s Green Room

Press/Details:

- Closed to the press.
- OLEM recommends the America Recycles Summit, which will occur after the Roundtable, is the preferred option for Congressional participation/engagement.

Objectives:

- Executives from industry, federal, state, tribal, and local government, and trade associations will commit to continue working together over the next 2 years to build on their successes and implement a national framework for advancing the U.S. recycling system, including developing a national goal to increase recycling.
- EPA Administrator will recognize the charter participants of the new WasteWise Recycling Demand Challenge. Charter participants will announce their commitment to buy recycled materials and to manufacture recycled and recyclable products to advance the U.S. recycling system.

Participants: EPA Administrator along with ~30 CEOs/President/Cabinet-level Executives from businesses, government associations, industry associations, local governments, non-profit organizations. Major investors (e.g., Citibank) that invest heavily domestically and the U.S. Chamber of Commerce are also invited as investments to recycling infrastructure are essential in achieving high-quality recycled materials.

Questions: Contact Mya Sjogren (sjogren.mya@epa.gov) or Suzie Boxman (boxman.suzanne@epa.gov).

America Recycles Roundtable Invitees
Last Updated: 10/21/2019

First Name	Last Name	Title	Company Name	Organization Type	RSVP to Roundtable
1. Brian	McPheely	CEO	Pratt Industries	Brand/Corporations	
2. Kathleen	McLaughlin	VP & Chief Sustainability Officer, Walmart Inc, President, Walmart Foundation	Walmart	Brand/Corporations	
3. Matt	Perrin	Head of Government Relations and Regulatory Affairs	Kroger	Brands/Corporations	
4. Brian	Cornell	Chairman and CEO	Target Corporation	Brands/Corporations	No
5. James	Quincey	CEO	Coca-Cola	Brands/Corporations	Yes (Director, Corporate R&D)
6. Bob	Gangort	CEO	Keurig Dr Pepper	Brands/Corporations	Yes (Chief Sustainability Officer)
7. Steven	Presley	Market Head and CEO	Nestle USA	Brands/Corporations	Yes (Manager, Corporate Communications)
8. Ramon	Laguarta	CEO	PepsiCo	Brands/Corporations	
9. David	Taylor	President and CEO	Procter & Gamble	Brands/Corporations	
10. Jim	Fish	President and CEO	Waste Management	Brands/Corporations	Yes (VP of Recycling)
11. Michael	Nedd	Acting Director	Bureau of Land Management	Federal Partners	
12. Mary	Neumayr	Chairman	Council on Environmental Quality	Federal Partners	Yes

America Recycles Roundtable Invitees
Last Updated: 10/21/2019

First Name	Last Name	Title	Company Name	Organization Type	RSVP to Roundtable
13. Wilbur	Ross	Secretary	Department of Commerce	Federal Partners	
14. Rick	Perry	Administrator	Department of Energy	Federal Partners	
15. Joseph	Simons	Chairman	Federal Trade Commission	Federal Partners	
16. Kelvin	Droegemeier	Director	Office of Science and Technology Policy	Federal Partners	Yes
17. James	Reilly	Director	U.S. Geological Survey	Federal Partners	
18. Thomas	Donahue	President	U.S. Chamber of Commerce	Professional/Industry Associations	
19. Becky	Keogh	Secretary	Arkansas Department of Energy and the Environment	Government Associations	Yes
20. Conchita	Taitano	President	Association of State and Territorial Solid Waste Management Officials	Government Associations	Yes (Executive Director)
21. Don	Welsh	Executive Director	Environmental Council of the States	Government Associations	Yes (Project Manager)
22. Stephen	Benjamin	President	United States Conference of Mayors	Government Associations	Yes (Assistant Executive Director)
23. Pat	Herrity	Springfield District Supervisor	Fairfax County	Local governments	
24. Michael	Grappe	Director of Special Projects	Arkansas Division of Environmental Quality	Local Governments	Yes
25. Christopher	Geldart	Director	DC Department of Public Works	Local Governments	Yes

America Recycles Roundtable Invitees
Last Updated: 10/21/2019

First Name	Last Name	Title	Company Name	Organization Type	RSVP to Roundtable
26. Kathryn	Garcia	Commissioner	NYC Department of Sanitation	Local Governments	
27. Jacob	Duer	President and CEO	Alliance to End Plastic Waste	Non-Profit Organizations	
28. Bryan	Staley	President and CEO	Environmental Research and Education Foundation	Non-Profit Organizations	Yes
29. Nina	Goodrich	Executive Director	GreenBlue Institute	Non-Profit Organizations	Yes
30. Helen	Lowman	President and CEO	Keep America Beautiful	Non-Profit Organizations	Yes
31. Keefe	Harrison	CEO	The Recycling Partnership	Non-Profit Organizations	Yes
32. Heidi	Brock	President and CEO	American Forest & Paper Association	Professional/Industry Associations	
33. Robin	Wiener	President	Institute of Scrap Recycling Industries	Professional/Industry Associations	Yes
34. David	Keeling	Board President	National Recycling Coalition	Professional/Industry Associations	
35. Darrell	Smith	President and CEO	National Waste and Recycling Association	Professional/Industry Associations	
36. Terese	Colling	President	Paper Recycling Coalition	Professional/Industry Associations	
37. Tony	Radoszewski	President and CEO	Plastics Industry Association	Professional/Industry Associations	
38. David	Biderman	Executive Director	Solid Waste Association of North America	Professional/Industry Associations	

America Recycles Roundtable Invitees
Last Updated: 10/21/2019

First Name	Last Name	Title	Company Name	Organization Type	RSVP to Roundtable
39. Will	Sagar	Executive Director	Southeast Recycling Development Council	Professional/Industry Associations	Yes
40. Phillip	Bell	President	Steel Manufacturers Association	Professional/Industry Associations	
41. Carolyn	Cawley	President	U.S. Chamber of Commerce Foundation	Professional/Industry Associations	Yes (VP Environmental Affairs and Sustainability)
42. Robert	Hitt	Secretary of Commerce	South Carolina Department of Commerce	State Government	
43. Gerald	Wagner	Acting Chair	National Tribal Operations Council	Tribal	Yes
44. Joe	Quinn	Vice President of Public Affairs	Aluminum Association	Professional/Industry Associations	Yes
45. Scott	DeFife	President	Glass Packaging Institute	Professional/Industry Associations	
46. Jared	Kushner	Assistant to the President and Senior Advisor	The White House	Federal Partners	
47. Brook	Rollins	Assistant to the President for Strategic Initiatives	The White House	Federal Partners	
48. Kevin	Butt	Regional Environmental Sustainability Director	Toyota Motor North America, Inc.	Brands/Corporations	
49. Geoff	Freeman	President and CEO	Grocery Manufacturers Association	Professional/Industry Associations	
50. Steven	Russell	VP Plastics Division	American Chemistry Council	Professional/Industry Associations	Yes
51. Rebecca	Zimmer	Global Director of Sustainability	Starbucks	Brands/Corporations	

Organization	Last Name	First Name	Email	Quantity
Amazon	Oster	Jake	osterjak@amazon.com	1
American Association of Convenience	Schnare	Carolyn	cschnare@convenience.org	1
American Beverage Association	Daum	Megan	mdaum@ameribev.org	1
American Chemistry Council	Muhuri	Prapti	prapti_muhuri@americanchemistry.com	1
American Forest & Paper Association	Bartheld	Elizabeth	Elizabeth_Bartheld@afandpa.org	1
American Forest & Paper Association	Craig	Jordan	jordan_craig@afandpa.org	1
American Forest & Paper Association	Manger	Stacie	stacie_manger@afandpa.org	1
American Forest & Paper Association	Pickard	Laura	laura_pickard@afandpa.org	1
American Institute of Architects	De Cola	Melanie	melaniedecola@aia.org	1
Animal Digestible Food Packaging	Cooper	Jack	JLC@adfpi.org	1
Arizona Department of Environmental Quality	Grappe	Michael	grappem@adeq.state.ar.us	1
Arizona Department of Environmental Quality	Keogh	Becky	Keogh@adeq.state.ar.us	1
Arizona State University	Owens	Norma	norma.owens@asu.edu	1
Asphalt Shingle Recycling Systems	Horton	Dan	dan.horton@asrsystems.net	1
Bates Trucking & Trash Removal	Lewis-Reid	Tara	tlewis@batesrucking.com	1
Can Manufacturers Institute	Breen	Scott	scott.r.breen@gmail.com	1
Cape May County Municipal Utilities Authority	Crumbock	Linda	crumbockis@cmcmua.com	1
Circular CoLab	Lee	Gina	gina@circularcolab.org	1
City of Winchester, VA	Neese	Michael	michael.neese@winchesterva.gov	1
CO2 Efficient	McGinnis	Sean	mcginnis@co2efficient.com	1
Colling Swift & Hynes	McPoland	Fran	McPoland@collingswifthyne.com	1
concerned citizen (see note on Summit	YOUNG	DR LIH YOUNG	lyly2kj@gmail.com	1
DC Department of Public Works	Lee	Howard	Howard.Lee@dc.gov	1
Delta Plastics	Whiteley	Sean	tmorris@deltapl.com	1
Dominion Energy	Cheatham	Dell	dell.cheatham@dominionenergy.com	1
Dominion Energy	Curll	Lisa	lisa.m.curll@dominionenergy.com	1
Environmental Research & Education Foundation	Staley	Bryan	bstaley@erefdn.org	1
European Union	Torta	Giuliana	giuliana.torta@eeas.europa.eu	1
Flexible Packaging Association	Singhal	Ram	rsinghal@flexpack.org	1
Food Rescue	Williamson	John	jw@foodrescue.net	1
Fortune Group Responsible Resource Recovery	Wang	Eric	eric@fortunegroup.net	1
Fortune WEEE	Yuen	Chris	chris@fortuneweee.com	1
Gadgettronix	Bruner	William	williambruner@gadgettronix.com	1
General Motors	Marczewski	Breitner	breitner.marczewski@gm.com	1
George Mason University	Auger	Ben	bauger@gmu.edu	1
Georgetown University	Devanney	Patrick	pd677@georgetown.edu	1
Global Blue DVBE, Inc	E kert	Mark	Mark@gbdvbe.com	1
Grocery Manufacturers Association	Golison	Marissa	mgolison@gmaonline.org	1
Gypsum Association	Meima	Stephen	smeima@gypsum.org	1
Hickok Cole	Lennihan	Holly	hlennihan@hickokcole.com	1
Hickok Cole	Onorato	Joel	jonorato@hickokcole.com	1
Industry Dive (press)	Rosengren	Cole	crosengren@industrydive.com	1
Institute of Scrap Recycling Industries, Inc.	Adler	Adina Renee	aadler@isri.org	1
Institute of Scrap Recycling Industries, Inc.	Wiener	Robin	rwiener@isri.org	1
Jacobs	Sauder	Steve	steve.sauder@jacobs.com	1
Keep America Beautiful	Connor	Samuel	sconnor@kab.org	1
Keep America Beautiful	Hartmann	Randy	rhartmann@kab.org	1
Keep America Beautiful	Lowman	Helen	hlowman@kab.org	1
Lego	Hughes	Karen	Karen.Hughes@LEGO.com	1
Localvest	Koev	Marty	marty@localvest.com	1

Localvest	Koev	Marty	marty@localvest.com	1
Mattress Recycling Council	Barnes	Lori	lbarnes@mattressrecyclingcouncil.org	1
National Aeronautics and Space Administration	Boone	Allen	allen.j.boone@nasa.gov	1
National Association of Regional Councils	routzahn	jessica	jessica@narc.org	1
National Gbbin & Th@Gbbinc Association	Smith	Ashlea	asmith@gbbinc.com	1
National League of Cities	Berndt	Carolyn	berndt@nlc.org	1
National Waste & Recycling Association	Germain	Anne	agermain@wasterecycling.org	1
Nestle	Dimiero	Emily	Emily.Dimiero@US.nestle.com	1
North Carolina Department of Environmental Quality	Worley	Wendy	wendy.worley@ncdenr.gov	1
Prince George's County Public Schools	Gillespie	Sara	sara.campbell@pgcps.org	1
RecycleGO	Cooper	DeNeile	deneile@recyclego.com	1
SciAps, Inc.	Dias	Vidal	vdias@sciaps.com	1
Sidewalk Infrastructure Partneres	Delucia	Michael	mdelucia@sidewalkinfra.com	1
Solid Waste Association of North America	Maxwell	Jesse	jmaxwell@swana.org	1
South Carolina Department of Commerce	Fryer	Chantal	cfryer@scommerce.com	1
Specialty Graphic Imaging Association	Nortz	Heather	hnortz@sgia.org	1
Steel Manufacturers Association	Stuart	Eric	stuart@steelnet.org	1
U.S. Air Force	Kasunic	Michelle	michelle.j.kasunic.civ@mail.mil	1
U.S. Chamber of Commerce	Potter	Stephanie	spotter@uschamber.com	1
U.S. Conference of Mayors	Sheahan	Judy	jsheahan@usmayors.org	1
U.S. Department of Commerce	Yardley	Sarah	syardley@doc.gov	1
U.S. EPA	Sharpe	Kristinn	sharpe.kristinn@epa.gov	1
U.S. EPA	Sjogren	Mya	sjogren.mya@epa.gov	1
U.S. EPA	Taitano	Conchita	conchita.taitano@epa.guam.gov	1
U.S. EPA	Wallace	Jess	wallace.jessica@epa.gov	1
United Nations	Bradshaw	Halle	halle.bradshaw@un.org	1
USA Gypsum	Weaver	Terry	terry@usagypsum.com	1
Van Dyk Recycling Solutions	Neitzey	Mark	mneitzey@vdrs.com	1
Vinyl Institute	Krock	Richard	rkrock@vinylinfo.org	1
Waste Management	Robinson	Susan	srobinson@wm.com	1
Wisetek	Boorstein	Zack	zackb@wisetekusa.com	1
	Ajumobi	Oluwayemisi	yemysya@gmail.com	1
	Bell	David Louis	davidlouisbell@gmail.com	1
	brody	marilyn	missy7500@gmail.com	1
	brody	marilyn	missy7500@gmail.com	1
	Johnson	Antron	hrhantron@gmail.com	1
	Johnson	Jeanie	jeanieajohnson@gmail.com	1
	Minstrell	Michelle	wasteknowledge@gmail.com	1
	Paulsworth	Ashley	ashley0paulsworth@gmail.com	1
	Rendel	Rebecca	rebecca2659@gmail.com	1
	Santoro	Joseph	joe.a.santoro@gmail.com	1
	Stephens	Robert	rgs2010@yahoo.com	1
	Yakoub	Abdallah	abdallah.yakoub@gmail.com	1

Summit

Organization	Last Name	First Name	Email	Quantity	Notes
Amazon	Kietzer	Teresa	teresa@amazon.com	1	
Amazon	Osterjak	Jake	osterjak@amazon.com	2	
American Beverage Association	Daum	Megan	mdaum@ameribev.org	1	
American Chemistry Council	Cookson	Craig	craig_cookson@americanchemistry.com	1	
American Chemistry Council	Cookson	Craig	craig_cookson@americanchemistry.com	1	
American Chemistry Council	Muhuri	Prapti	prapti_muhuri@americanchemistry.com	1	
American Chemistry Council	Russell	Steven	siysha_joseph@americanchemistry.com	1	
American Forest & Paper Association	Bartheld	Elizabeth	Elizabeth_Bartheld@afandpa.org	1	
American Forest & Paper Association	Brock	Heidi	Heidi_Brock@afandpa.org	1	
American Forest & Paper Association	Craig	Jordan	jordan_craig@afandpa.org	1	
American Forest & Paper Association	Hawkinson	Brian	brian_hawkinson@afandpa.org	1	
Arizona Department of Environmental Quality	Grappe	Michael	mgap@azdeq.state.ar.us	1	
Arizona Department of Environmental Quality	Keogh	Becky	Keogh@adeq.state.ar.us	1	
Battery Council International	Dry	Lisa	ldry@batteryCouncil.org	1	
Can Manufacturers Institute	Breen	Scott	scott.r.breen@gmail.com	1	
Circular Colab	Lee	Gina	gina@circularcolab.org	1	
Coca-Cola	karas	Bruce	missyowens@coca-cola.com	1	
Coca-Cola	Owens	Valerie	missyowens@coca-cola.com	2	
Colgate-Palmolive	owens	missy	missyowens@coca-cola.com	1	
Colling Swift & Hynes	Bedarf	Anne	anne_bedarf@cdpaal.com	1	
concerned citizen	McPoland	Fran	mcpoland@colling@swift-hynes.com	1	
Construction & Demolition Recycling Association	YOUNG	DR LIF YOUNG	lyy2k4@gmail.com	1	See: https://www2.census.gov/cac/sac/meetings/2018-12/young-public-comment.pdf?
Crowell Moring	Turley	William	turley@cdrecycling.org	1	
	Brown	Byron	bbrown@crowell.com	1	
DC Department of Public Works	White	Annie	annie.white4@dc.gov	1	
Environmental Research & Education Foundation	Karlner	Debra	dkarlner@erfdn.org	1	
Environmental Research & Education Foundation	Staley	Bryan	bstaley@erfdn.org	1	
Environmental Research & Education Foundation	Staley	Bryan	bstaley@erfdn.org	1	
Foodservice Packaging Institute	Dempsey	Natha	ndempsey@fpi.org	1	
Foodservice Packaging Institute	Dyer	Lynn	lrosseth@hotmail.com	1	
General Motors	Marczewski	Breitner	breitner.marczewski@gm.com	1	
General Services Administration	Parker	Rickey	rick.parker@gsa.gov	2	
Georgia Department of Transportation	Gaudin	Shametreia	Travel19au@isdemail.ch	1	
GreenBlue	Goodrich	Nina	nina.goodrich@greenblue.org	1	
GreenBlue	Matta	Trina	trina.matta@greenblue.org	1	
Grocery Manufacturers Association	Golison	Marissa	mgolison@gmaonline.org	1	

Grocery Manufacturers Association	Stasz	Meghan	mstasz@maconline.org	1
Howard University Industry Dive	Grayson	Alexandra	alexandra.grayson@hawaii.howard.edu	1
Institute of Scrap Recycling Industries, Inc.	Rosengren	Cole	crosengren@industrydive.com	1
Institute of Scrap Recycling Industries, Inc.	Adler	Adina Renee	aadler@isri.org	1
Institute of Scrap Recycling Industries, Inc.	Wiener	robin	rwiener@isri.org	1
Institute of Scrap Recycling Industries, Inc.	Wiener	Robin	rwiener@isri.org	1
Interior Removal Specialist, Inc. Jacobs	Ludt	Richard	richard@irsdemo.com	1
Keep America Beautiful	Sauder	Steve	steve.sauder@jacobs.com	1
Keep America Beautiful	Connor	Samuel	sc Connor@kab.org	1
Keep America Beautiful	Hartmann	Randy	rhartmann@kab.org	1
Keep America Beautiful	Lowman	Helen	hlowman@kab.org	1
Keurig Dr. Pepper	Oxender	Monique	monique.oxender@kdp.com	1
Lajolla Band of Luiseno Indians	Roy	Rob	rob.roy@lajolla-nsn.gov	1
Legal Club	Parker	Bryan	parker@lggroup.com	4
Mattress Recycling Council	Barnes	Lori	lbarnes@mattressrecyclingcouncil.org	5
McDonald's	Marshall	Jess	jessica_marshall@us.mcd.com	1
Ministry of Foreign Affairs: Norway	Berg	Jon	jon.berg@mfa.no	1
National Association of Convenience Stores	Schmare	Carolyn	cschmare@convenience.org	1
National League of Cities	Berndt	Carolyn	berndt@nlc.org	1
National Waste & Recycling Association	Germain	Anne	agermain@wasterecycling.org	2
Nestle	Collier	Nicole	nicole.collier@us.nestle.com	1
Nestle	Collier	Nicole	nicole.collier@us.nestle.com	1
Nestle	McLeod	Chastity	chastity.mcleod@us.nestle.com	1
New York City Department of Sanitation	MacBride	Samantha	smacbride@dsny.nyc.gov	1
North Carolina Department of Environmental Quality	Worley	Wendy	wendy.worley@ncdemon.gov	1
Northeast Recycling Council	Rubinstein	Lynn	lynn@nrec.org	1
RecycleGO	Cooper	DeNele	denele@recyclego.com	5
Rubicon	Rachelson	David	david.rachelson@rubiconglobal.com	1
Solid Waste Association of North America	Maxwell	Jesse	jmaxwell@swana.org	1
Sony	Yokoyama	Keiko	Keiko.Yokoyama@sony.com	1
South Carolina Department of Commerce	Fryer	Chantal	cfryer@sccommerce.com	1
Southeast Recycling Development Council	Sagar	Will	will.sagar@serdc.org	1
Specialty Graphic Imaging Association	Kinter	Marcia	marcia@sgia.org	1
Steel Manufacturers Association	Stuart	Eric	stuart@steelnet.org	4
The Aluminum Association	Meenan	Matt	mmeenan@aluminum.org	2
U.S. Chamber of Commerce	Chaitovitz	Chuck	cchaitovitz@uschamber.com	1
U.S. Chamber of Commerce	Potter	Stephanie	spotter@uschamber.com	1
U.S. Conference of Mayors	Sheahan	Judy	jsheahan@usmayors.com	1
U.S. EPA	Sharpe	Kristin	sharp.kristin@epa.gov	1

U.S. EPA	Siogren	Mya	siogren.mya@epa.gov	1
U.S. EPA	Taitano	Conchita San Nicolas	conchita.taitano@epa.guam.gov	1
U.S. EPA	Taitano	Conchita San Nicolas	conchita.taitano@epa.guam.gov	1
U.S. House of Representatives	Cash	Jennifer	jennifer.cash@mail.house.gov	1
Washington Wide News & TV	Won	Michelle Misook	mayqueenkorea@gmail.com	1
Wisetek	Boorstein	Zack	zack@wisetekusa.com	1
	Bell	David Louis	davidloisbell@gmail.com	1
	Cash	Jennifer	jennifer.e.cash@gmail.com	1
	Heikal	Islam	heikal_islam@yahoo.com	1
	Yakoub	Abdallah	abdallah.yakoub@gmail.com	1

OVERVIEW OF WEEKLY EVENTS

America Recycles Week – November 11-15, 2019

Schedule of EPA Events

FOR INTERNAL USE ONLY

Monday, November 11, 2019					
Office/ Region	Event Name	Description	Time	Communications, Press and/or Social Media Activities	Open to the Public? Y/N
R6, in partnership with Keep America Beautiful	Fort Bliss Recycling Hero Award	Keep America Beautiful (KAB) is presenting an award to the Recycling Hero(es) from Fort Bliss. Fort Bliss in El Paso, Texas has an aggressive recycling program and awards individuals monthly for their recycling efforts. At this event KAB could announce a program to help develop similar recycling programs at other military bases.	Unknown	Social media, press release, open press	Y

Tuesday, November 12, 2019					
Office/ Region	Event Name	Description	Time	Communications, Press and/or Social Media Activities	Open to the Public? Y/N
HQ	WasteWise 25 th Anniversary	EPA announcement of 25 th Anniversary of the WasteWise program. WasteWise is a measurement tool that can potentially be used to track progress on America Recycles Day commitments.	TBD	Press release, social media	Y
R4	FGC Award Winner Recognition	Plaque presentation by RA at Veterans Administration	TBD	All	Y

Tuesday, November 12, 2019

Office/ Region	Event Name	Description	Time	Communications, Press and/or Social Media Activities	Open to the Public? Y/N
R4	R4 Go4Green Team Lunch and Learn	Lifecycle Building Center and City of Atlanta	11:30 am – 1 pm	Internal to Region 4	N
R5	FGC Award presentation	Presentation of award at Argonne National Lab. Cheryl Newton, R5 Deputy Regional Administrator, will present the award.	AM	All: The Lab will do a FB live streaming event, including an interview/conversation with Chris Newman. We'll also have a tour of some of their facilities.	Y, online portion

Wednesday, November 13, 2019

Office/ Region	Event Name	Description	Time	Communications, Press and/or Social Media Activities	Open to the Public? Y/N
HQ	State of Recycling briefing to House Recycling Caucus	ISRl is sponsoring a "State of Recycling" briefing to House Recycling Caucus. EPA is attending the briefing.	Unknown	Unknown	Unknown
HQ	U.S. Chamber of Commerce Foundation Corporate Citizenship Conference	Event is led by the U.S. Chamber of Commerce. EPA is participating. Kathleen Salyer (EPA HQ) is moderating a recycling panel, "America Recycles: Place-Based Action for Improved National Recycling and Recovery." Hear from Beyond 34 coalition contributors active in the America Recycles Network about their collaborative	Panel: 11:05 am – 12:05 pm	Social media, open press	Unknown

Wednesday, November 13, 2019

Office/ Region	Event Name	Description	Time	Communications, Press and/or Social Media Activities	Open to the Public? Y/N
		approaches to improving our domestic recycling and recovery processes. This panel will initiate a conversation on community-based private-public partnerships that will carry into the U.S. EPA's 2019 America Recycles Summit November 15.	Conference: All Day		
R1	WasteWise Forum	Co-sponsored workshop with the Massachusetts Department of Environmental Protection and RecyclingWorks MA for businesses and institutions. Presenting UMass Dartmouth with WasteWise Award.	9-1pm	RA will give out award	Y
R2	SMM Partners Meeting	Region 2 will hold a meeting for SMM Challenge Partners that will include presentations and award distribution	1-3pm	yes	Y
R4	SMM Grant Award Recognition	Region 4 is awarding 4 new SMM grants and two are in the Atlanta area – Check presentation at one grantee's location (Lifecycle Building Center)	TBD	All	Y
R5	WasteWise Award presentation	Honoring ComEd for 2018 WW award in Large Business Category and for being a Charter member (joined in 1994) in the WasteWise program. Event at ComEd offices in OakBrook Terrace, IL. Regional Administrator, Cathy Stepp will present the award.	12:30 PM	All	N
R9	WasteWise Partner Recognition	RA will attend event with one of the WW partners highlighted in the 25 th Anniversary booklet, recognizing all their work in the recycling/reuse and waste reduction arena.	TBD	Social Media	N

Wednesday, November 13, 2019

Office/ Region	Event Name	Description	Time	Communications, Press and/or Social Media Activities	Open to the Public? Y/N
R10	U.S. Navy Northwest Recycling Fair	Tabling on recycling along with Snohomish County at Naval Station Everett's Recycling Fair. The event is open to residents of the base.	9-11am	Social Media	N

Thursday, November 14, 2019

Office/ Region	Event Name	Description	Time	Communications, Press and/or Social Media Activities	Open to the Public? Y/N
HQ	The Recycling Partnership Funding Partners Meeting	The Recycling Partnership is sponsoring the event. EPA HQ is participating; Peter Wright is delivering opening remarks. The meeting will bring together funding partners, staff, and guests to recognize efforts in current recycling and to provoke conversations that inspire and matter.	Opening session: 8:30 – 10:00 am	Unknown	Unknown
HQ	America Recycles Innovation Fair	EPA is co-hosting with co-hosting with TRP, ISRI, SWANA, and KAB. The Innovation Fair will showcase recent advances in materials and recycling technology. This event will showcase products and technologies that are advancing recycling and connect innovators with funders.	1:00 – 6:00 pm	Press release, social media, open press	Y
HQ	Event recognizing	Co-hosted by EPA with NWRA at Innovation Fair.	TBD	Social media, open press	Y

Thursday, November 14, 2019

Office/ Region	Event Name	Description	Time	Communications, Press and/or Social Media Activities	Open to the Public? Y/N
	veterans in recycling industry	The National Waste and Recycling Association (NWRA) plans to have programming/messaging around veterans finding employment in the recycling industry.			
HQ	America Recycles Reception	Hosted by KAB. EPA will attend.	4:00-6:00	Unknown	N
R4	Food Waste Summit	Speak at a Food Waste Summit in Western NC -by invitation to the DD	9:00 – 4:00	Unknown	Y
R9	Recognition Event with Chumash Casino Resort	RA will visit EPA award-winning waste reduction leader to highlight replicable zero waste leadership for America Recycles Week outreach.	TBD	Social Media...TBD	N
R10	Earth Friendly Products Facility Tour and Awards Presentation	Earth Friendly Products (product name ECOS), which is headquartered in California but has a manufacturing facility in Lacey, WA, has recently won a Safer Choice Partner of the Year award. In addition to their Safer Choice efforts, they also strive for zero waste, both through diversion and recycling practices. Their award application was inclusive of their overall practices. RA is invited to participate in the tour and do the award presentation.	TBD	All – TBD	N
R10	Federal Green Challenge Regional Waste Award Presentation	Present award to Bonneville Power Administration at end of facility and site tour. Inviting other Portland area federal facility representatives to participate.	1 pm	Social Media	N

America Recycles Day – Friday, November 15, 2019

Office/ Region	Event Name	Description	Time	Communications, Press and/or Social Media Activities	Open to the Public? Y/N
HQ	America Recycles Day Roundtable	Invitation only. The Roundtable will bring together a select group of senior-executives from industry, federal, state, tribal, and local governments, and trade associations to meet with Administrator Wheeler and discuss their corporate goals and how their commitments to work with EPA will advance America's recycling system. The Administrator will recognize the charter participants of the WasteWise Recycling Demand Challenge during the event.	8:00 – 9:30 am	Closed press	N
HQ	America Recycles Day Summit	The Summit will bring together all signers of the America Recycles Pledge and other key representatives from industry, non-profits, federal, state, tribal, and local government, and trade associations. The steering committees of America Recycles Workgroups will report on progress made since last year and present and discuss future commitments to advance the U.S. recycling system. EPA will highlight some new initiatives and programs to support America Recycles work.	10:00 am – 1:00 pm	Social media, press release (and Regional press releases throughout the week), live-streaming of event, open press	N

America Recycles Day – Friday, November 15, 2019					
Office/ Region	Event Name	Description	Time	Communications, Press and/or Social Media Activities	Open to the Public? Y/N
R4	R4 Go4Green Film Screening	Environmental documentary (waiting on approval) for internal audience	12:00	Internal	N
R4	EPA America Recycles 2019	Webinar to follow ARW cohosted by SERDC	11/21 2:00	Email notification of Webinar availability	Y

Additional Planned Events Post- America Recycles Week

- R9- Nov 20 @ 11:30 – (Schedule for ARW did not work out.) RA will be holding an awards event for our Regional Federal Green Challenge Winner – USPS San Diego for their 35% increase in procurement and use of recycled paper. - Social Media – not open to public

SUMMARY OF NATIONAL FRAMEWORK



National Framework to Advance the U.S. Recycling System

America Recycles Workgroup and EPA Actions "At-a-Glance"

Draft: 10/21/19

Background

On November 15, 2018, EPA Administrator Andrew Wheeler hosted the America Recycles Day Summit, which brought together stakeholders from across the U.S. recycling system to join EPA in signing the America Recycles Pledge. All 45 signing organizations, including EPA, pledged to work together to identify specific actions to take in addressing the challenges and opportunities facing the U.S. recycling system. Through the pledge, organizations committed to leveraging their collective expertise, strengths and resources to address these challenges and opportunities. Participants included representatives from federal, local, state and tribal governments; the recycling industry; and manufacturers and brands. Following the 2018 America Recycles Summit, EPA worked with the organizations that signed the America Recycles Pledge to form four workgroups aligned with four critical action areas:

- Promoting Education and Outreach
- Enhancing Materials Management Infrastructure
- Strengthening Secondary Material Markets
- Enhancing Measurement

During America Recycles Week 2019, EPA intends to release the *National Framework to Advance the U.S. Recycling System*, which will articulate the collaborative efforts undertaken to-date by the America Recycles effort as well as the path forward for future action in 2020. 2019 deliverables and announcements, organized by action area, are described below. Also included are anticipated 2020 activities that will be reflected in the *National Framework*.

Action Area 1: Promoting Education and Outreach

2019 Workgroup Priority Product

- Announce key messages on recycling issues for public and media audiences in the form of an infographic. This infographic will include messages that:
 - Emphasize the strength of the recycling system.
 - Articulate the range of benefits of recycling to reinforce the importance of recycling.
 - Demonstrate recycled materials have value, are of good quality, and are not diminished because the materials had a prior life.
 - Emphasize the value of recyclables as commodities (rather than waste), including the value of sustainable materials management and life-cycle analysis.

2019 EPA Actions/Announcements

- Release EPA publication featuring pledge signatory success stories and Veteran's Stories.
- Announce release of EPA publication featuring WasteWise Partner success stories in honor of its 25th Anniversary.
- Announce plans to evaluate the feasibility of launching a pilot educational campaign on how to decrease the amount of plastic film entering curbside collection programs by encouraging recycling through retail collection programs, anticipated in 2020.

2020 Actions to be included in National Framework

- Develop and make available a set of common recycling messages on nationally-significant issues (e.g. plastic film/bags), building off the efforts of workgroup members.
- Evaluate the feasibility of a national public relations campaign to lay the foundation for common messaging on nationally-significant materials or issues. The campaign could be directed at engaging youth or other audiences.
- Share information about available free, open-source, downloadable labels for recycling bins.

Action Area 2: Enhancing Materials Management Infrastructure

2019 Infrastructure Workgroup Priority Action

- The Infrastructure workgroup is compiling available funding opportunities around the country for infrastructure upgrades. To help governments and private companies fund infrastructure improvements, they need to first know what resources are available. The list of resources will provide an overview of funding resources available to supplement organizations' efforts across the system.

2019 EPA Actions/Announcements

- Initiate work to map existing recycling infrastructure. This effort will begin to provide a clearer picture of the infrastructure that is currently available in this country to service millions of Americans' recycling needs. The map also will help identify where there are gaps in service and where more infrastructure is needed to enhance recycling collection and/or processing capabilities in the U.S.

2020 Actions to be included in National Framework

- Conduct and compile research on successful infrastructure investments and potential investment opportunities.
- Continue support of the "Materials Recovery for the Future" pilot project, which launched officially in February 2019.
- Share results and outcomes of the "Materials Recovery for the Future" pilot project to assess potential for replication.
- Explore the creation of incentives to encourage investment in recycling or find existing tax incentives that organizations could leverage to help materials recovery facilities (MRFs) evolve to meet the challenges posed by the evolving materials stream.

Action Area 3: Strengthening Secondary Materials Markets

2019 Markets Workgroup Priority Actions/Announcements

- Successful initiation of activities to spur market development across the country by EPA and the National Recycling Coalition through the co-sponsorship of two workshops at the Resource Recycling Conference and State of Texas Alliance for Recycling Summit.
- Launch of the "Recycling Demand Challenge" within EPA's WasteWise program, modeled after the Association of Plastics Recyclers Demand Champions Program, that could be applied to all materials in the recycling stream. The program would include development of a database to connect buyers and sellers of recyclable materials.
- Announce intent to develop a toolkit for governments, MRFs and associated facilities that includes FAQs, guidance on how to conduct cost vs. benefit analysis for investments, incremental and major

enhancements, planning for future materials, and contracting best practices to ensure the capability to meet current and future needs.

2019 EPA Actions/Announcements

- Announce open comment period for Federal Register notice requesting comments on the recommended recycled content levels and products associated with the Comprehensive Procurement Guidelines (CPG).

2020 Actions to be included in National Framework

- Determine the success of the NRC-EPA workshops by assessing results and follow-up activities by participating states. Expand and host workshops in other parts of the country.
- Continue efforts to finalize elements of the toolkit.
- Conduct and compile research on contracts, outreach strategies, financing opportunities, etc. to determine what is working well to better understand investment opportunities.
- Explore creation of incentives to encourage investment in recycling or find existing tax incentives that organizations could leverage to help materials recovery facilities (MRFs) evolve to meet the challenges posed by the evolving materials stream.

Action Area 4: Enhancing Measurement

2019 Measurement Workgroup Priority Action(s)

- Announce draft definition of “recycling.”
- Publish the recycling system map that depicts the flow of materials through the system.
- Convey progress on compiling information on a range of metrics and measures, including definitions, what types of analyses these metrics and measures support, where in the recycling process these measures/metrics apply, data available, data gaps/needs, quality of data, and pros and cons of the various measures.

2019 EPA Actions/Announcements

- Continue to facilitate the state measurement data sharing program.
- Provide status update of revisions underway to the 1997 document *Measuring Recycling – A Guide for State and Local Governments*.
- Announce intent to update to EPA’s Recon Tool, which calculates greenhouse gas emissions reductions associated with recycled content material.
- Announce intent to work collaboratively with America Recycles Network to establish a national goal to increase recycling.

2020 Actions to be included in National Framework

- Finalize definition of “recycling.”
- Develop additional definitions associated with materials flow through the system.
- Develop a central compilation of metrics on tonnage and conversions that could include a calculation tool (e.g., EPA’s WARM).
- Work with states to understand different methodologies for measuring diversion rates.
- Establish a national goal for recycling activities, similar in concept to the goal of 50 percent reduction of food waste by 2030.
- Compile results of workgroup activities (definitions, material flow map, metrics, measures and goals) for integration into the *Measuring Recycling: A Guide for State and Local Governments*. Release Guide.

2019 Cross-Cutting Activities that Support Multiple Action Areas

2019 Key Workgroup Product/Deliverable

- Announce the launch of a publicly accessible, web-based portal that will serve as a clearinghouse for recycling tools and resources, led by the Chamber of Commerce Foundation in partnership with U.S. EPA, the Institute for Scrap Recycling Industries (ISRI) and Keep America Beautiful.

EPA Products

- Release of the *National Framework to Advance the U.S. Recycling System*.
- EPA will continue facilitating and providing logistical support for workgroup meetings and dialogues, including hosting future meetings to implement actions within the National Framework.
- EPA will conduct webinars and outreach on the clearinghouse to increase resources/information included in the web-based tool; provide financial support towards operation and maintenance of the clearinghouse.

CHAPTER 3: ENVIRONMENTAL ACTIVITIES BY THE PVC INDUSTRY

Disposal of plastic wastes have been a major challenge in the context of waste disposal and prevention of environmental pollution. Issues have been pointed out regarding PVC and PVC products; quite a few of which are based on misunderstanding due to lack of accurate information, especially regarding dioxin formation.

The present status of various activities jointly promoted by the PVC industry, PVC converter organizations, relevant businesses, and the government administrations will be introduced here in chapter 3 in order to provide proper understanding of PVC and PVC products.

1. Responsible Care

(1) Pollutant Release and Transfer Register (PRTR) in the PVC industry

Ethylene dichloride (EDC) and vinyl chloride monomer (VCM), which are raw materials of PVC, have been included in Class I Designated Chemical Substances under the **PRTR** Law. From fiscal 2002, it has been made mandatory for relevant businesses to report actual emission figures of the preceding year regarding these substances to municipal governments of the region.

Prior to this the Vinyl Environmental Council (VEC) had taken the measures for improvement of emissions based on **Responsible Care** and made use of the economically viable best available technology (BAT) through its "2nd three-year plan for reduction of EDC/VCM emissions to air" which started from fiscal 2000.

■ Backgrounds of the voluntary standards for EDC/VCM emissions

Carcinogenicity issues upon EDC/VCM manufacturing processes triggered publication of a work environment standard of VCM in Japan in 1975 (work environment; below 2 ppm, inside polymerization reactors; below 5 ppm, both

geometrical average concentration) were established.

The Japanese PVC industry, mainly VEC (then called the PVC Industry Association) determined its own voluntary rules for reduction of VCM emission and started its 1st voluntary reduction plan in fiscal 1997.

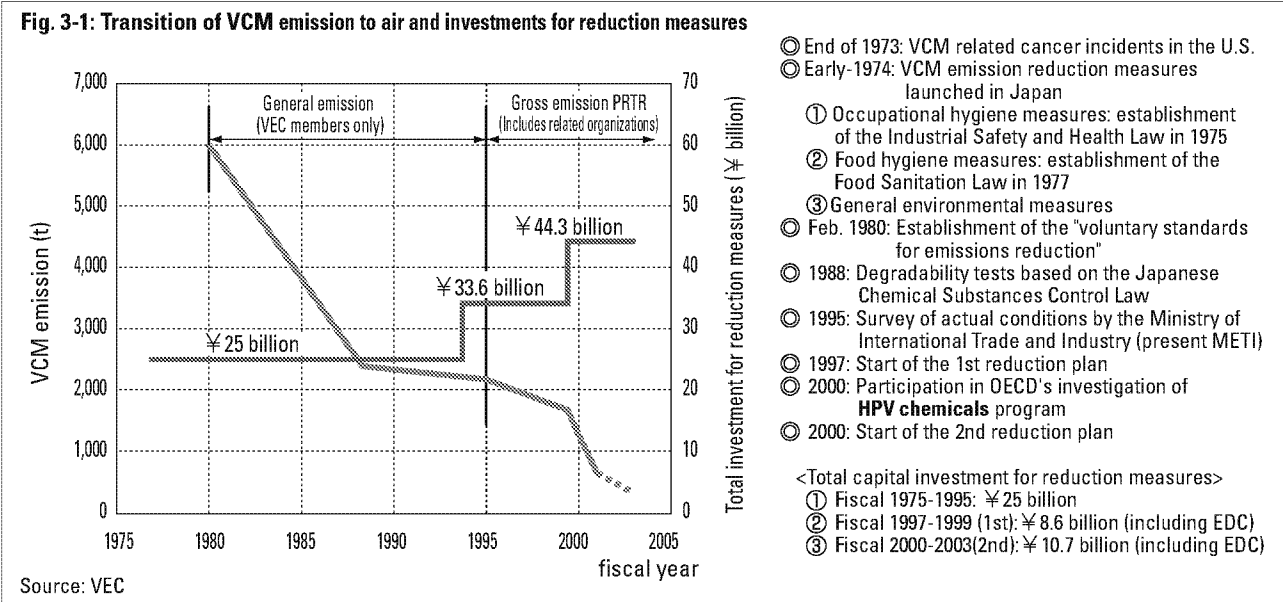
The targets of the voluntary reduction plan were set at 22% reduction for VCM emissions and 30% reduction for EDC within three years. As a result, 24% reduction of VCM and 59% reduction of EDC were achieved, both of which far exceeded the initial targets.

■ The 2nd voluntary emission reduction plan

VEC has been addressing its 2nd voluntary emission reduction plan since fiscal 2000, subsequently to its 1st plan. Emissions have been set at 100 g-VCM/t-VCM upon production of VCM, 100 g-VCM/t-VCM for use in suspension polymerization process, and 1,000 g-VCM /t-VCM for use in emulsion polymerization processes. Emission upon EDC production is set at 250 g-EDC/t-EDC. Further reductions are aimed for.

■ Measurement of concentrations in the environment

Since 1997, the Ministry of the Environment is continuing annual measurements of EDC/VCM



Responsible Care (RC) :
Voluntary control activities of chemical manufacturers and dealers to conduct and improve environmental, safety and health measures throughout the lifecycle of chemical substances (from R&D to production, logistics, use, consumption, and waste disposal) based on the principles of self-determination and self-responsibility.

Pollutant Release and Transfer Register (PRTR) :
A system to track, compile and release to the public the data regarding various hazardous chemical substances such as emission sources, emissions to environment, or amount transported outside of business premises in the form of wastes.

High production volume (HPV) chemicals :
Any existing chemical substance manufactured over 1,000 tons per country per year. The HPV chemicals program by the OECD collects and evaluates data on safety. In Japan also the Japan Chemical Industry Association mainly undertakes related tasks.

concentrations in the general environment. In fiscal 2006, more than 2,400 samples were taken for measurements of VCM and EDC respectively- from 254 sites for VCM and from 247 sites for EDC (Fig.3-2).

The results of analysis showed that from 1997 to 2006, the average VCM concentration declined from 0.21 µg/m³ to 0.05 µg/m³. As for VCM, annual average concentration in air of 10 µg/m³ (0.0036 ppm) as a guideline was set in 2003, but the present actual concentration is far below this guideline level.

Likewise, the average EDC concentration in the general environment was 0.20 µg/m³ in 1997 but has been reduced to almost one half since 2001.

Furthermore, an annual average concentration guideline in air of 1.6 µg/m³ is set for EDC.

(2) Dioxins emissions from VCM production facilities

Under the Law Concerning Special Measures against Dioxins, every year the Ministry of the Environment (MoE) conducts a survey of the status of dioxins emissions from specified facilities and facilities (industries) likely to be the emission sources based on available information.

Fig.3-3 shows the results of survey for dioxins emission from the VCM production facilities. Emissions from VCM production facilities in 2006 were 0.36g, which amounts to less than 0.4% of emissions from all industries, which totaled 93 g.

Fig. 3-2 VCM and EDC concentrations in the general environment

Unit: µg/m³

VCM										
Fiscal year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
# of sites	11	152	162	169	184	197	218	219	227	226
Average	0.21	0.13	0.10	0.08	0.07	0.07	0.05	0.06	0.04	0.05
Min. value	0.012	0.009	0.008	0.002	0.003	0.002	0.002	0.003	0.002	0.003
Max. value	0.9	2.2	1.8	1.1	1.6	2.7	1.4	1.8	0.6	1.5

EDC										
Fiscal year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
# of sites	184	212	220	216	227	228	233	229	249	249
Average	0.20	0.19	0.15	0.16	0.11	0.10	0.10	0.13	0.10	0.13
Min. value	0.017	0.025	0.010	0.008	0.006	0.017	0.008	0.005	0.005	0.005
Max. value	2.7	2.6	2.0	2.1	1.1	1.3	1.0	1.7	0.7	1.7

Source: Monitoring of hazardous air pollutants, MoE

■ Emissions to air

The annual emissions to air is calculated per facility based on the results of voluntary measurements of exhaust gases resulting from liquid waste incineration (7 facilities throughout Japan: 0.019~1.3 ng-TEQ/m³N) and results of voluntary measurements of exhaust gases from waste gas incineration (5 facilities throughout Japan: 0.00025~0.29 ng-TEQ/m³N). The total annual emission is calculated by summing all of these.

The emission per ton of VCM production is 78.2 ng-TEQ/ton in the case of liquid waste incineration (i.e., the total annual emission is divided by the total of annual VCM production of 3,228 thousand tons by the facilities incinerating liquid waste). Likewise, emission per ton VCM production is 6.7 ng-TEQ/ton in the case of waste gas incineration (i.e., the total annual emission is divided by the total of annual VCM production of 2,721 thousand tons.

■ Emissions to water

The annual emissions to water for 2006 was estimated by summing the total annual emissions from the eight industrial establishments (0.0017~2.0 pg-TEQ/L) in Japan, owned and operated by the member companies of VEC.

Fig. 3-3 Results of dioxins emission survey from VCM production facilities

Unit: g-TEQ/year

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Emissions to air	0.20	0.20	0.20	0.19	0.29	0.29	0.30	0.21	0.22	0.28
Emissions to water	0.54	0.53	0.55	0.20	0.58	0.16	0.10	0.07	0.10	0.08
Total	0.74	0.73	0.75	0.39	0.87	0.45	0.40	0.28	0.32	0.36

Source: Dioxins emission inventory, MoE

2. Recycling of PVC Products

(1) Status and activities

■ Status of recycling, processing and disposal of plastics and PVC products

According to the Plastic Waste Management Institute, the total discharge of plastic waste in 2006 was 10.05 million tons, out of which 2.04 million tons (20%) were treated by **mechanical recycling**, 280 thousand tons (3%) by **feedstock recycling** (use in blast furnaces and liquefaction), and 4.89 million tons by **thermal recycling** (heat recovery)49%. Therefore, the total recycling rate was 72%, and the remaining 28% were either incinerated or disposed in landfills (Fig.3-4).

As for waste PVC products the total discharge was approximately 1.0 million tons, out of which approximately 390 thousand tons (38%) were treated by mechanical recycling. Compared with plastics as a whole, the mechanical recycling of PVC waste is a step ahead. This is because PVC is less affected by contamination of foreign matters and has various

recycling applications.

■ Recycling activities of the PVC industry

There are roughly three types of recycling process for plastics.

※ Mechanical recycling:

A recycling process to return the recovered and sorted plastic waste back into plastic material by physical procedures

※ Feedstock recycling:

A recycling process to convert recovered plastic waste into feedstock through thermal processing, pressurizing and chemical reactions. Plastic waste is converted into reducing agents for blast furnaces, fuel/feedstock for cement kilns, and raw material gas for chemical processes.

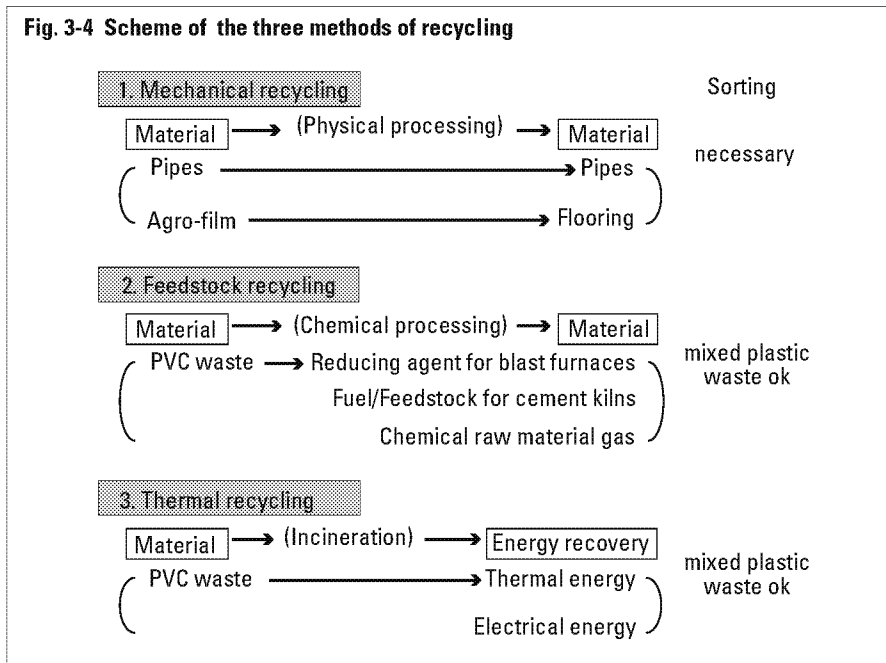
※ Thermal recycling:

A recycling process where waste plastics are incinerated for thermal energy recovery

The Japanese PVC industry primarily promotes mechanical recycling, but this recycling process is not suitable for excessively deteriorated or fouled plastic waste. Also, since there are still some difficulties in further developing applications and distribution channels, the increase of recycling volume is limited. For such reasons, feedstock recycling is also promoted due to its versatility.

Recycling projects are shared, for instance the Japan PVC Environmental Affairs Council (JPEC) mainly takes charge of mechanical recycling, while VEC mainly takes charge of feedstock recycling.

Fig. 3-4 Scheme of the three methods of recycling



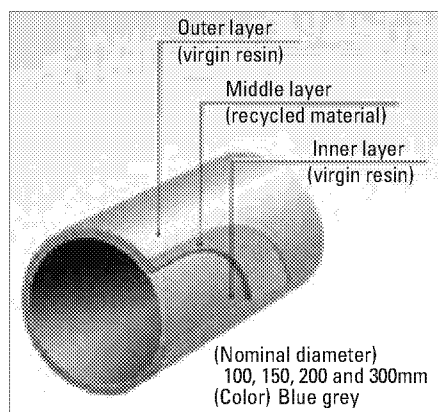
(2) Mechanical recycling

■ Pipes

Pipes are the largest application for PVC, and approximately 500,000 tons of PVC pipes (including fittings) are manufactured annually. This amount represents roughly one-third of the annual PVC consumption. The amount of waste pipes are estimated to be about 35,500 tons in 2002, out of which about 48% are recycled back to pipes. In

order to promote recycling of PVC pipes, the Japan PVC Pipe and Fittings Association (JPPFA) took the initiative to establish 10 recycling centers throughout Japan in December 1998 under cooperation with existing recycling business entities. In addition to these recycling centers, intermediate collection facilities were provided for nationwide collection of waste pipes. As of May 2007, 17 recycling centers and 33 collection facilities (a total of 50 facilities) have been established. Along with the conventional

pipe purchasing system, an intermediary treatment consignment system was newly started from 2003.



Recycled three-layer pipes

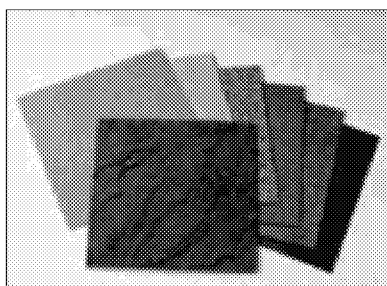
■ Agricultural PVC films

Presently, about 70,000 tons of agricultural PVC films (agro-films) are discharged per year, out of which about 50% is mechanical recycled.

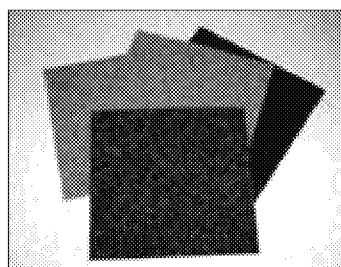
The mechanical recycling of agro-films started during the mid 60's. Today, farmers, agricultural organizations, and municipal governments have set up a council in order to systematically collect agro-film waste for appropriate recycling. More than 10 manufacturing centers for recycled raw material products have been established throughout Japan, and a system for recycling has been set up. At these centers, flooring, footwear, sheets and others are manufactured out of the recovered agro-films. In order to further promote the mechanical recycling of agro-films, 7 agro-film producers and the National Federation of Agricultural Cooperative Association (*Zen-Noh*) established the "*Noubi* Recycle Acceleration Council (NAC)" in July 1999.

NAC is expected to promote the implementation of nationwide recovery and processing systems in order to develop new agro-film processing technologies and applications, to realize a totally recycle-based society in the future.

■ PVC construction materials



**Homogeneous tiles
(Recycled agro-film
material is used as
backing)**



**Tile (Modular) carpets
(Recycled agro-film
material is used as
backing)**

The Law Concerning Recycling of Materials from Construction Work (in short, Construction Material Recycling Act) established in 1999 has made mandatory the recycling of specified construction materials. Concrete, asphalt and wood are specified for recycling at the moment, and PVC construction materials are not included.

On the other hand, PVC construction materials are widely used due to their excellent properties as construction materials (fire retarding properties, durability, designability, processability, etc.). VEC, JPPFA, PVC windows industries association, PVC spout manufacturers association, Interiorfloor Industrial Association (flooring), Japan Vinyl Goods Manufacturers Association (wallcovering), and the Japanese Electric Wire & Cable Makers' Association jointly organized a "study group for recycling of PVC construction materials" with participation from the chemical industry division and the ceramics industry division of the Ministry of International Trade and Industry (the present METI). This study group is active to date under the name of "PVC construction material liaison conferece" and continues to contribute to recycling systems within each industry through information sharing and close horizontal communications among the PVC construction material related industries.

This group discussed the ways to promote the recycling activities, and proactively made recommendations to the Japanese government. As a result, the Law for Promotion of Effective Utilization of Resources was enacted in April 2001. Rigid PVC pipes and fittings were specified as products to be recycled under the Law for Promotion of Effective Utilization of Resources, and recycling efforts were made mandatory. Also, rigid PVC pipes, spouts, window profiles, flooring and wallcovering were required to attach the common "∞ PVC" mark to show that they are PVC construction materials.

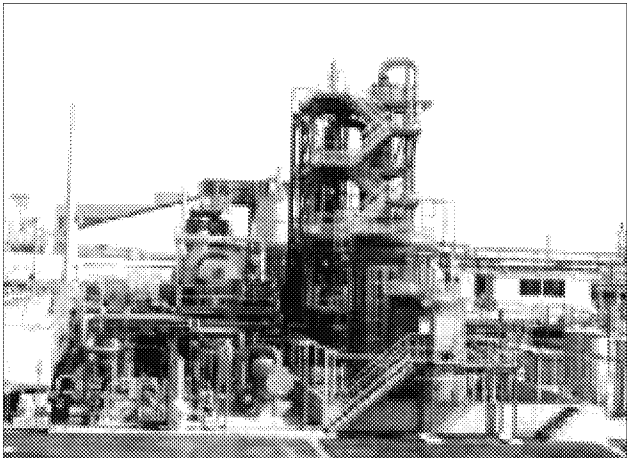
Following the decision, the PVC construction material industries further promoted recycling activities, and PVC construction materials gained credit as products that are easy to use. Furthermore, sewage pipes and heat insulating window profiles made of recycled rigid PVC material were specified as products to be procured (for public construction projects) under the Law on Promoting Green Purchasing. The recycling activities for PVC flooring installation wastes by 8 PVC flooring manufacturers of the Interiorfloor Industrial Association were given the sanction of specified industrial waste disposer for wide area recycling from the minister of the environment for the first time as a trade organization. The recycling activities have been launched in 2003.

(3) Feedstock recycling

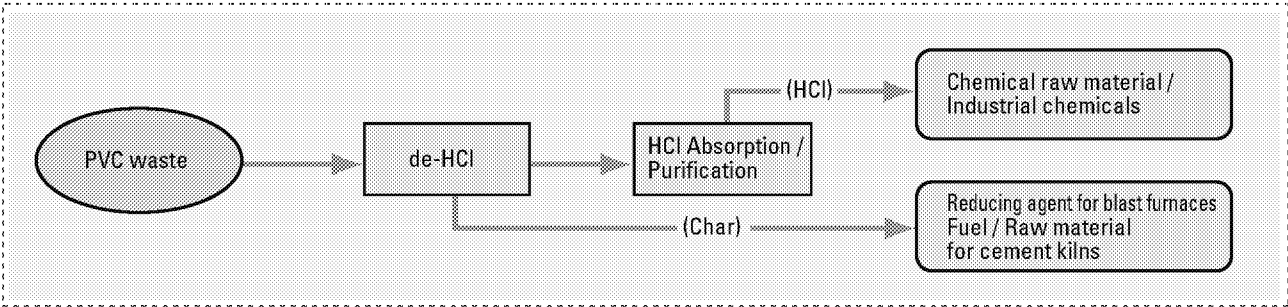
■ Plastic contributing to steel manufacturing - feedstock for blast furnaces

By this recycling technology, coke, which works as a reducing agent to remove oxygen from iron ore in steel manufacturing, can be partially replaced with plastic waste. From the environmental standpoint, various advantages are expected from this technology including saving cokes and CO₂ reduction.

The Japanese PVC industry conducted research and development of blast furnace feedstock technologies for plastic waste (including PVC waste), jointly with the present JFE Kankyo. Following pilot tests in 1998 and operations at a demonstration plant in 2000, the preparation for commercial operation is now under way at JFE Kankyo since fiscal 2004.



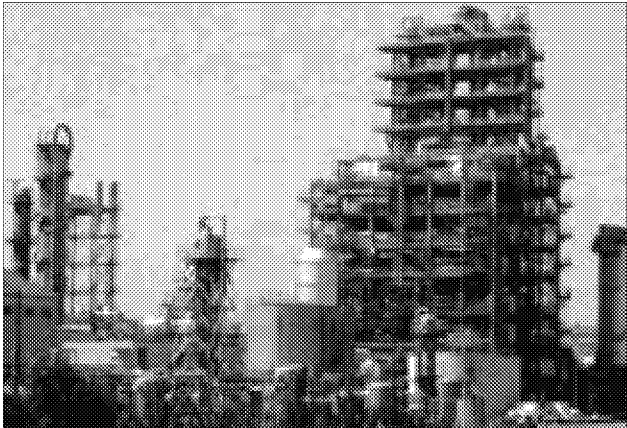
JEF Steel's Keihin Steelworks (Kawasaki City)



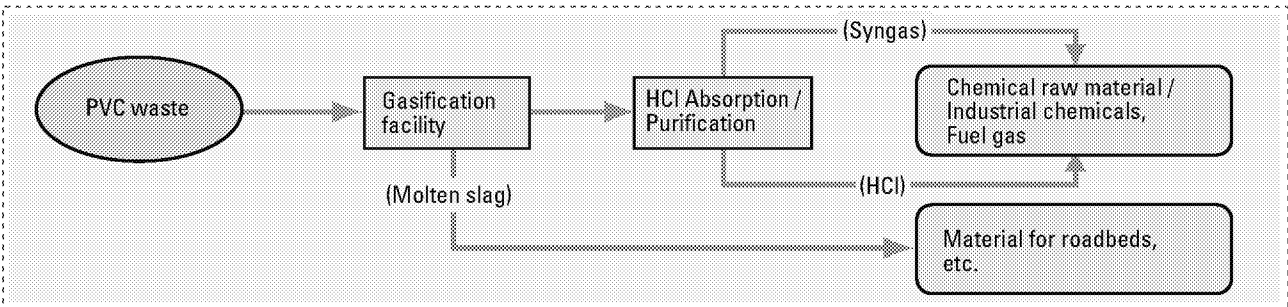
■ Generating new chemical raw materials or energy - gasification

By thermal cracking at high temperatures, PVC waste can be recycled into gas components such as hydrogen chloride, hydrogen and carbon monoxide, which can be put to use.

The Japanese PVC industry has been working to materialize gasification technologies to treat various plastic wastes including PVC, jointly with Nippon Steel, Daicel and Sumitomo Metals. Hydrogen and carbon monoxide derived from this process can be used for ammonia and methanol production, or as fuel gas for power plants. Hydrogen chloride (hydrochloric acid) is widely used as chemical raw material or as industrial chemicals. Also, Ube Industries/Ebara Corporation (EUP) and Showa Denko are operating plants with pressurized two-stage gasification furnaces to meet the requirements of the Container and Packaging Recycling Law.

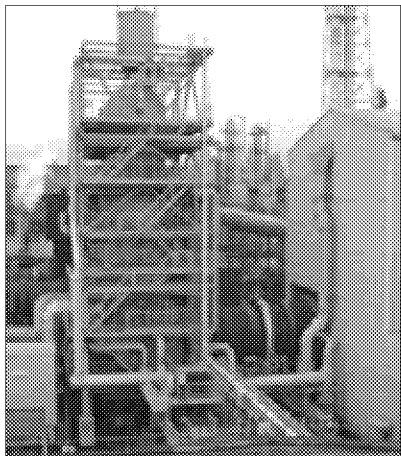


Showa Denko's Kawasaki plant (Kawasaki City)

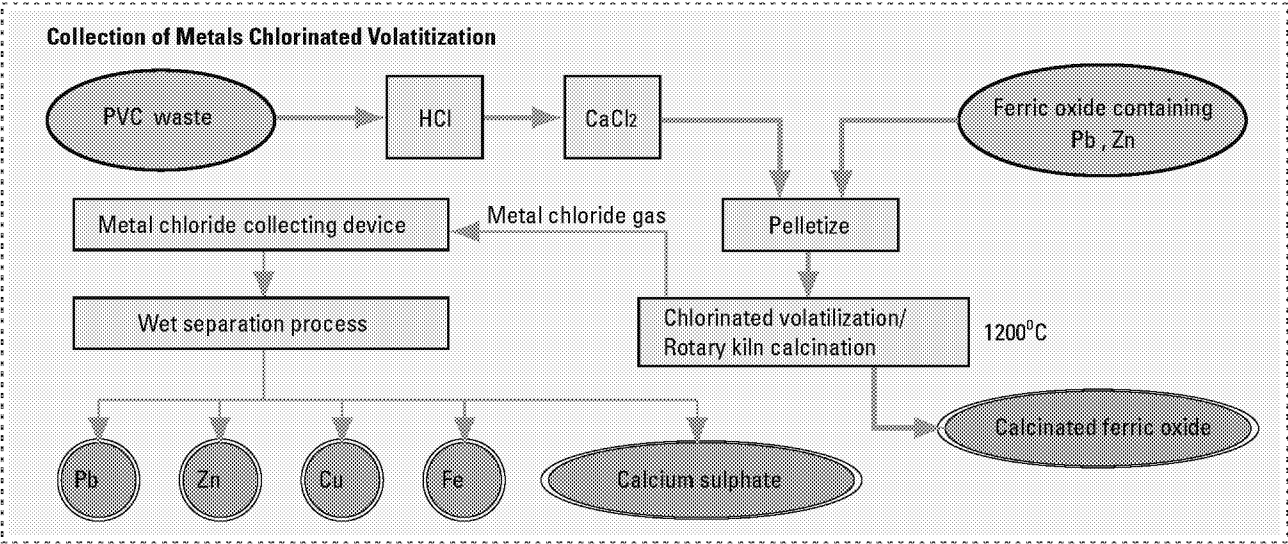


■ **Collection of metals by chlorinated volatilization (Kowa Seiko)**

This process separates iron and non ferrous metals from iron rich matters (such as dust collected at the collection ducts of steel making plants) by using chlorine. PVC is incinerated to collect thermal energy and at the same time the hydrogen chloride generated is proactively used as the chlorine source for this chlorinated volatilization process. As an example, during the 5 years between 2003 and 2007, 200 tons per year of scrap or waste PVC wallcovering generated from either building or renovating collective housings and buildings were collected and treated under the Wallcovering Association of Japan's initiative.



Kowa Seiko
(Kitakyushu City)

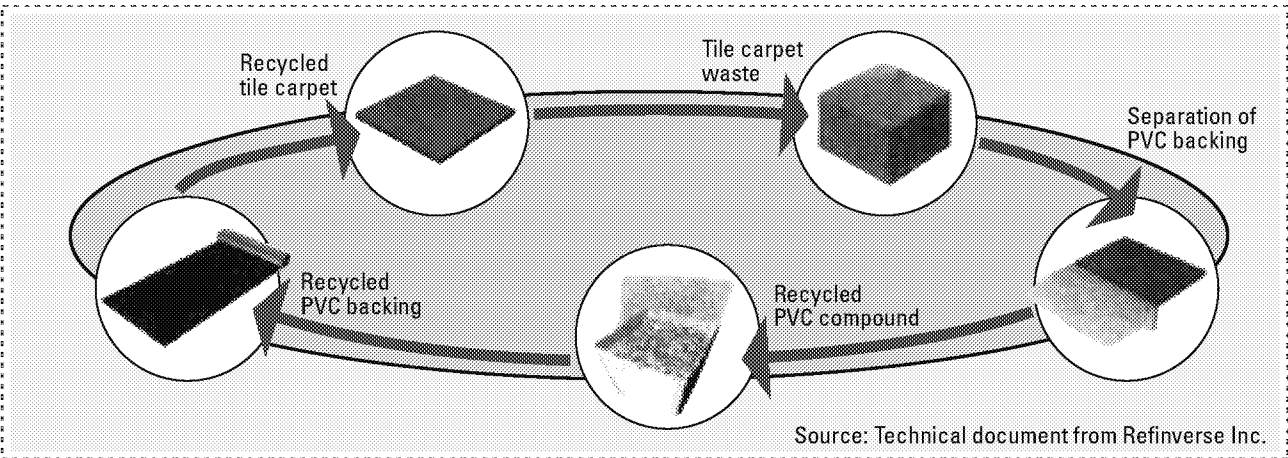


(4) Recycling under new technologies

■ **Material recycling by dicing and pulverizing technology**

Refinverse Inc. had launched the recycling of PVC layers from used modular carpet discharged from office buildings and intermediate processing companies. The technology involves scraping off

PVC layers from modular carpets with precision and separating them in powder form to reuse as a raw material component for the manufacture of new tile (modular) carpets. It has been commercialized at their plant in Chiba with an annual processing capacity of 18,000 tons since 2006. This quantity amounts to about 15% of the total modular carpets discharged.



Source: Technical document from Refinverse Inc.

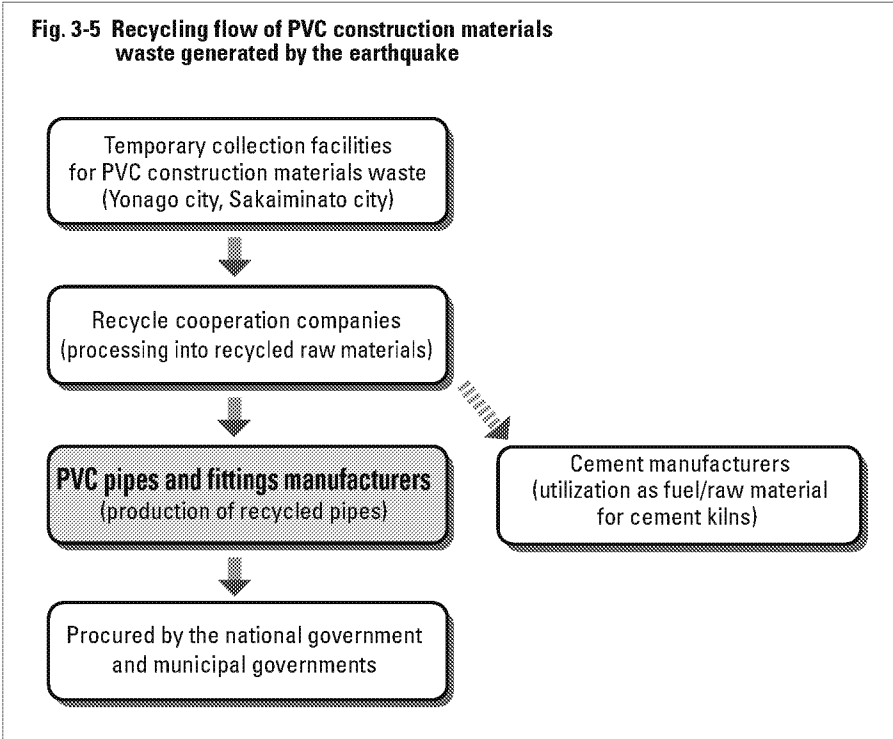
3. Constructing Social Systems

(1) Recycling of "PVC construction material wastes" generated from the western Tottori prefecture earthquake

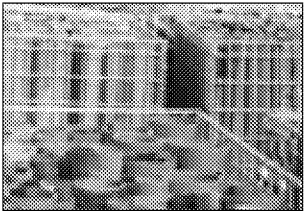
collection facilities in Yonago city and Sakaiminato city, processed into regenerated materials, and then recycled back into PVC pipes by pipe manufacturers. A part of the waste material was reused (by feedstock recycling) as the fuel/raw material for cement kilns.

Under cooperation with the Tottori prefecture government, Yonago city authorities, and Sakaiminato city authorities, the Japanese PVC Industry undertook recycling of "PVC construction material wastes" recovered from destroyed houses and buildings by the western Tottori prefecture earthquake (magnitude 7.3), which occurred on October 6, 2000. This was the first case in the world to recycle wastes generated by a natural hazard (not limited to PVC waste, but other plastics as well).

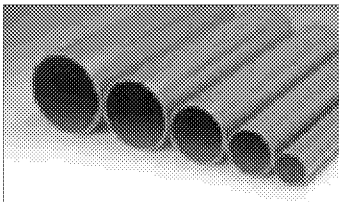
The PVC construction materials waste including pipes, spouts, corrugated sheets, etc. recovered from the collapsed houses and buildings were stored temporarily at the



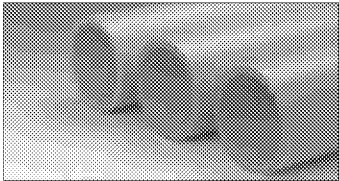
Temporary collection facilities for wastes



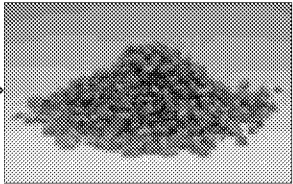
PVC construction materials waste generated by natural hazard collected in containers



Recycled pipe



Recycled pipe (3 layer pipe)



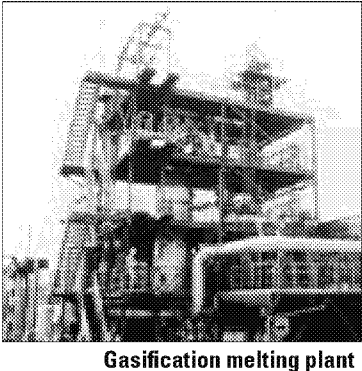
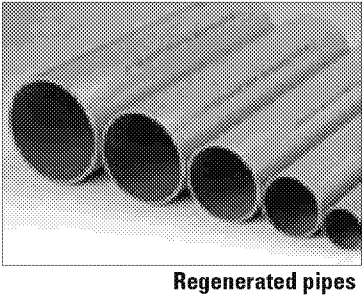
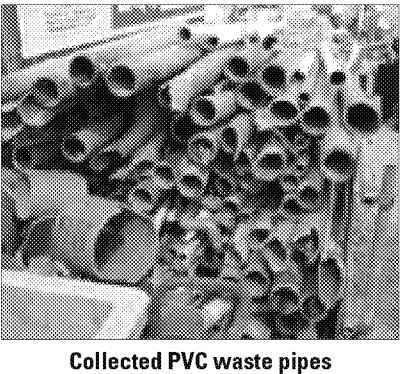
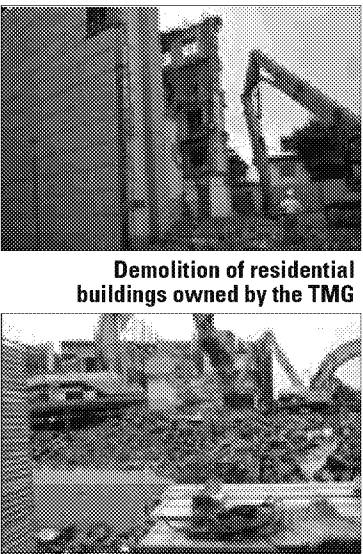
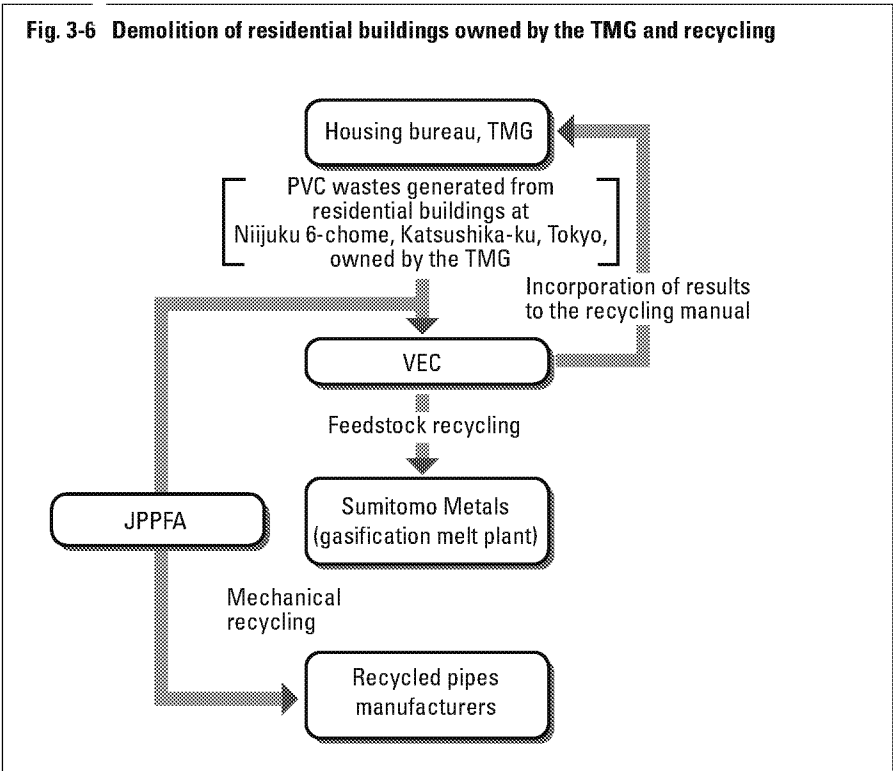
Raw material for pipes

(2) Recycling of "PVC construction materials wastes" recovered from demolition sites of residential buildings owned by the Tokyo metropolitan government (TMG) : an example of public-private sector cooperation

VEC, JPPFA, and Sumitomo Metals are promoting the demonstration experiment for feedstock recycling of waste PVC construction materials in cooperation with the TMG.

In July 2002, waste PVC construction materials generated from the demolition site at Nijuku, Katsushika-ku, Tokyo, were processed into raw material for recycled pipes by mechanical recycling ("Recycling model project for residential buildings owned by the housing bureau of TMG"). Also, a part of PVC construction materials waste, which were excessively fouled or mixed with foreign matters, were processed by a pilot gasification melting plant of Sumitomo Metals, in November 2002, for reuse as chemical feedstock. It was confirmed that there was no technical difficulties with the gasification. The results of feedstock recycling as well as mechanical recycling were reflected on the "manual of recycling waste construction

materials from residential building" (edited and published by the technical development division, regional housing department of the housing bureau, TMG. 2003).



(3) Recycling of PVC Profiles

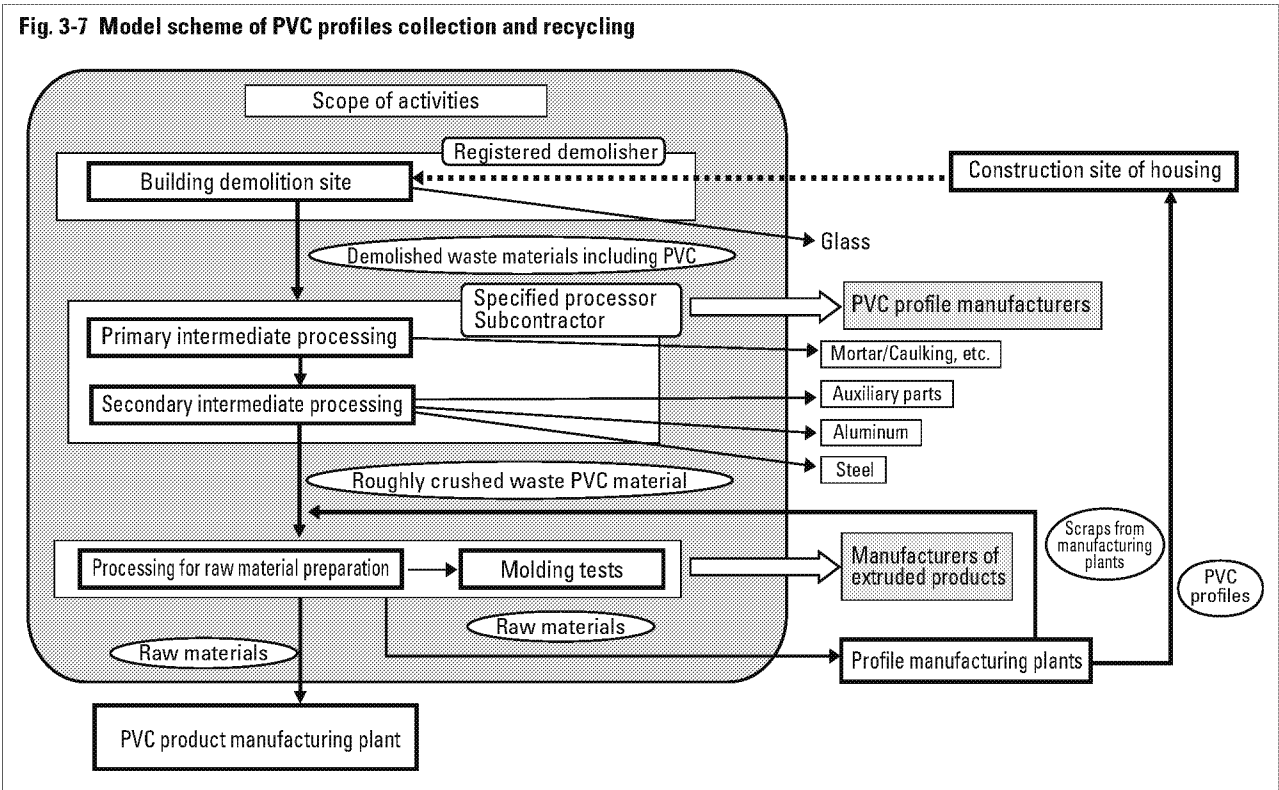
The PVC sash (PVC profile) is widely used as an energy saving construction material with a high heat-insulating feature. The PVC profile manufacturing industry is specified as the applicable industry along with the PVC pipe and fittings manufacturing industry under a "waste processing and recycling guideline for industries" by the industries structure council, (METI).

The environmental working group which was jointly formed by the technical committee of the PVC Windows Industries Association and the environmental issue committee of the Japan Sash Manufacturers Association tested the physical properties of recycled PVC profiles, and confirmed that there is no problem with the molding operation, and that the physical properties of molded window

frames are enough to meet the JIS standards.

Furthermore, the two-layer extrusion molding technology to use recycled material in the core section and use virgin resin in the surface layer of window profiles has already been put into practice. It has also been confirmed that the color variance of the recycled material with the color of finished product window profiles would not be a major problem for "sash-to-sash" recycling.

For information, this PVC window profiles recycling was selected by the METI as one of the evaluation themes for the ministry's open invitation for fiscal 2002, and evaluated under "PVC profiles recycling system survey", chaired by Mr. Tsuyoshi Seike, assistant professor of Tokyo University. The details of this survey are included in the "Handbook of recycling: 2002 edition" by the Hokkaido municipal government.



Collected waste PVC profiles



Washing waste PVC profiles with water

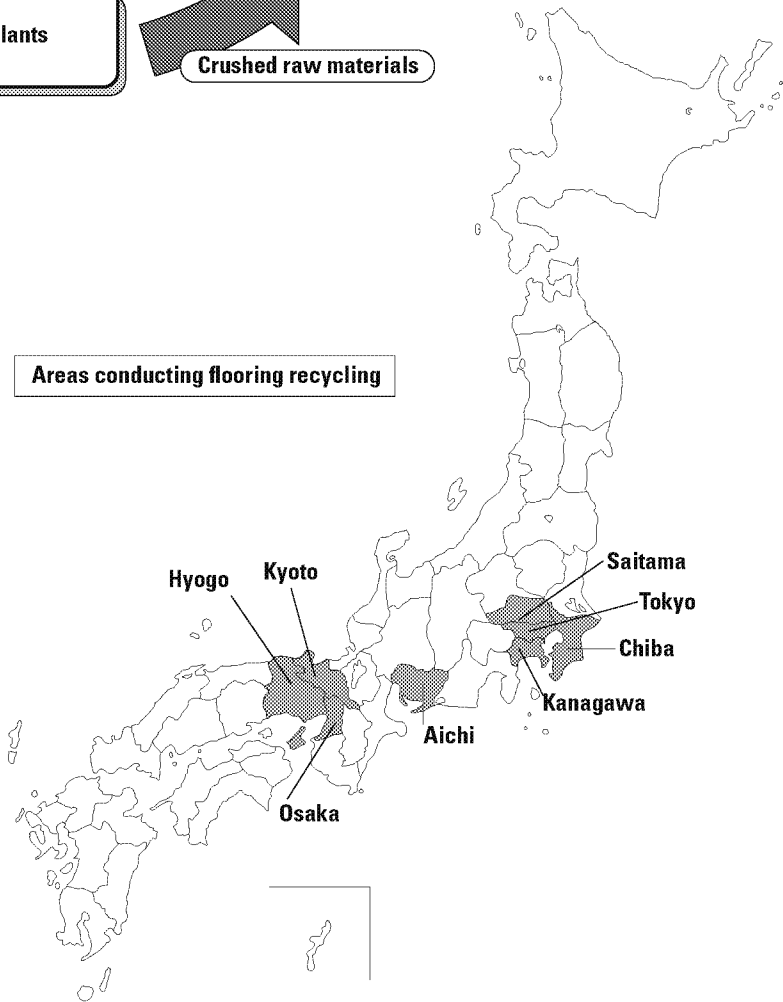
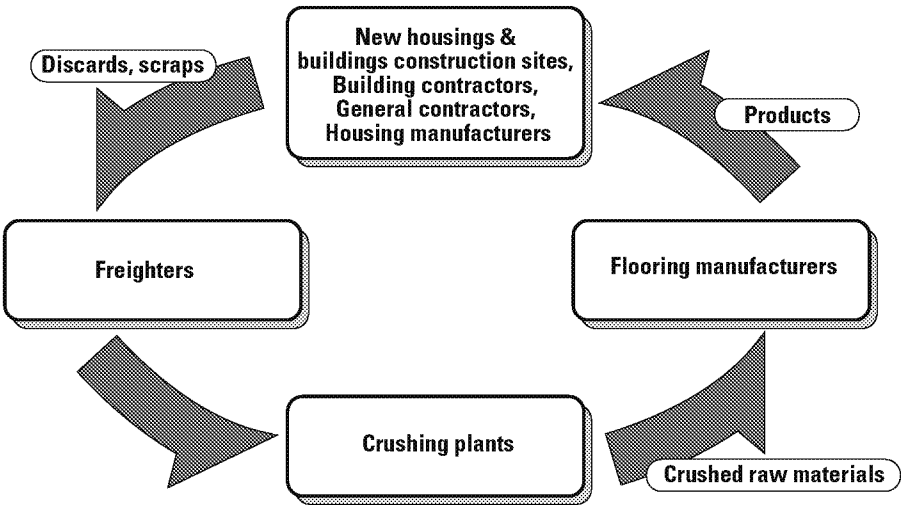
(4) Recycling of PVC flooring

PVC flooring is an important application that can be derived partially from used agricultural films or used cable covering.

The recycling of waste flooring itself have been initiated from April 2003 within 8 regions of Japan by 8 PVC flooring manufacturers which are members of the Interiorfloor Industries Association. Installation waste discards from new housings and buildings construction and reform sites are sorted and recovered, then recycled into flooring at each

manufacturers after crushing and processing. PVC flooring sheet, cushion flooring and homogeneous flooring tiles are recycled by the above 6 companies and 3 other subcontracted companies.

The feature of this recycling activity is "horizontal recycling from flooring into flooring" by the flooring manufacturers themselves. In March 2003, the Interiorfloor Industrial Association was specified as "industrial waste disposer for wide area recycling" from the Environment minister for the first time as a trade organization, and have launched its activities.



(5) Recycling of PVC wallcoverings

It has been over 30 years since PVC wallcovering was first introduced to Japan. Production of wall covering in Japan amounts to about 700 million m³, or about 200 thousand tons. The PVC wallcovering has become an inseparable part of comfortable residences, having durability, serviceability, and fire retarding properties, and has established its own position in the modern life.

On the other hand, recycling of wallcovering was not conducted partially due to the small amount of wastes, due to its long service life of over 10 years.

However, gradual increase of discharged waste wallcovering is expected, in line with the increased number of demolished or renewed houses and buildings after a few tens of years of construction. Labeling of "∞ PVC" mark to PVC wallcoverings is now mandatory in the same way as with PVC pipes and flooring, as a "specified product for indication obligations" under the 1999 revision of the Law for Promotion of Effective Utilization of Resources. As a result, how to cope with social requirements has become a major issue to be tackled by the wallcovering industry.

An experimental recycling model was carried out as preparation for full-scale recycling systems, by the Wallcoverings Association of Japan (WACOA), which is comprised of manufacturers/whole sellers and servicing companies, from April 2003.

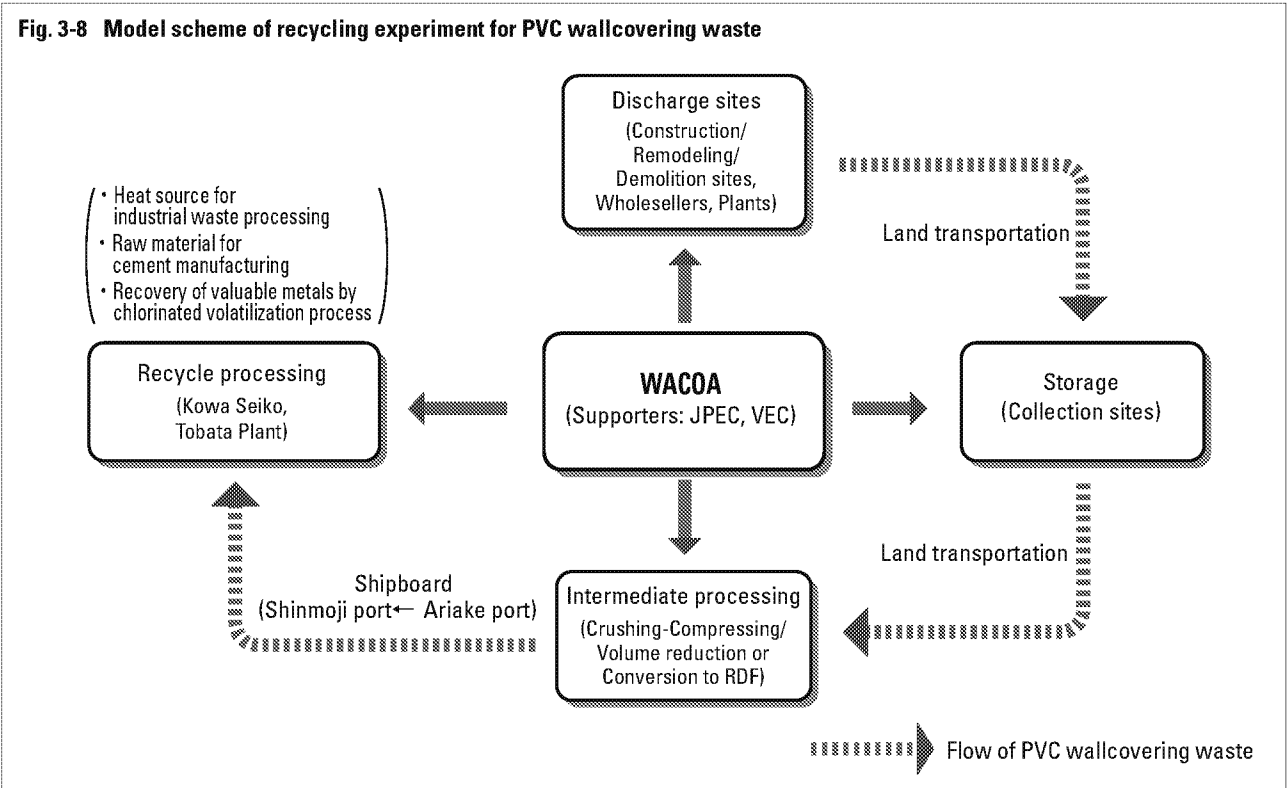
Fig.3-8 shows the flow of the recycling scheme. The waste wallcovering collected and sorted by the building contractors were temporarily transferred to collection facilities, compressed/crushed upon

intermediate processing, and then transported to Tobata Plant of Kowa Seiko in Kita-Kyushu City, Fukuoka Prefecture, where wallcovering waste was utilized as heat source for industrial waste processing, or as feedstock to cement kilns. Recovered chlorine from the process was effectively used in the extraction of valuable metals under chlorinated volatilization process. Also, a part of waste PVC wallcovering was utilized as raw material in the manufacturing of boards and blocks by mechanical recycling.

The WACOA of Japan successfully completed this model experiment in 2007, and is currently considering a new business model for wallcovering recycling based on the outcome.



Compressed and packed PVC wallcovering waste



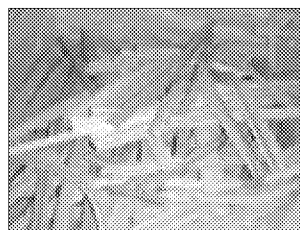
(6) Recycling of refrigerator door gaskets

In the past, the municipal governments collected end-of-life refrigerators, TV, air-conditioners and washing machines as large-sized wastes, and the majority of them were disposed in landfills. In April 2001, the Electric Household Appliances Recycling Law was enacted and about 10 million units of these products were recycled at more than 30 recycling plants throughout Japan. Steel for casing and glass used as the cathode-ray tubes were the major materials for recycling.

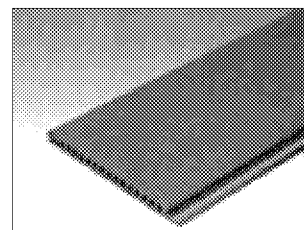
Although PVC parts were not applicable for recycling under the law, an effort to recycle refrigerator door gaskets made of PVC was initiated by recovering the gaskets and removing magnets from them, as a part of activities to materialize a recycled-oriented society. Recovered door gaskets are crushed into small pieces, molten by heating, and converted into synthetic wood for indoor flooring applications.



Separation of magnets from PVC gaskets at the recycling plant



Sorted refrigerator door gaskets



Synthetic wood for flooring

4. PVC Products and Recycling Related Laws

■ Basic Law for Establishing a Sound Material -Cycle Society (January 2001)

It is the basic framework law for the realization of a recycle-based society through the promotion of 3Rs (i.e., Reduce, Reuse, and Recycle) and subsequent incineration and volumetric reduction for appropriate disposal by landfill. Also, "the discharger responsibility" of business enterprises and citizens, as well as the concept of Extended Producer Responsibility (EPR) for manufacturers has been clarified. From the standpoint of implementing a recycle-based society, PVC is a plastic which can realize the 3Rs, since PVC products are resources saving, durable and easy to recycle.

■ Law for Promotion of Effective Utilization of Resources (April 2001)

It is a general law showing the basic framework for the promotion of the waste generation reduction (Reduce), the reuse of materials (Reuse), and the re-utilization (Recycle) by converting the materials into resources, and for extended service lives of products. The law has specified the industries which are obligated to manufacture recyclable products, and has specified the products to which identification marks are to be affixed in order to make sorting easier. Of the PVC products, rigid PVC pipes and fittings are specified products for mandatory recycling. PVC pipes

are also specified for marking indication. Furthermore, PVC-made spouts, window profiles, wallcovering, and flooring are also specified products for identification mark of "∞ PVC".



Identification mark

■ Containers and Packaging Recycling Law (April 2000)

Of the solid municipal wastes, about 60% by volume and about 25% by weight are containers and packaging. The law was first applied to PET bottles and glass bottles in 1996, and subsequently to plastics in general "as other plastics" and waste paper in April 2000.

Specified business entities, such as the manufacturers of containers, packaging and their contents, are required to entrust recycling to the specified corporate body by paying recycling charges. PVC bottles and sheets for commercial applications have been decreased, and presently they are estimated to occupy only 3-4% of total plastic wastes in solid municipal wastes.



Identification marks for containers and packaging



SPL code

■ Home Appliance Recycling Law
(April 2001)

The law promotes recycling of 4 large-sized electrical household appliances (i.e., refrigerators, TV, washing machines and air-conditioners) disposed from households as wastes, which had previously been collected and landfilled by municipal governments. The law is now applicable to these waste products from April 2001. Presently, the main materials specified for mandatory recycling are steel and glass, which amount to 50-60% of the total collected volume. Although recycling of PVC materials are not mandatory under the law in the same manner as with other plastics, some of the electric household appliance related companies have started recycling of PVC gaskets on refrigerator doors.

■ Construction Material Recycling Law
(May 2002)

The law promotes recycling of construction material waste, amounting to about 20% of the total industrial waste. Waste asphalt, concrete and wood are the 3 items in "specified construction material wastes" to be recycled under the law. Although PVC materials are not included in the specified materials under the law,

recycling systems for waste rigid PVC pipe is readily implemented, and intermediate collection facilities have already been deployed throughout Japan.

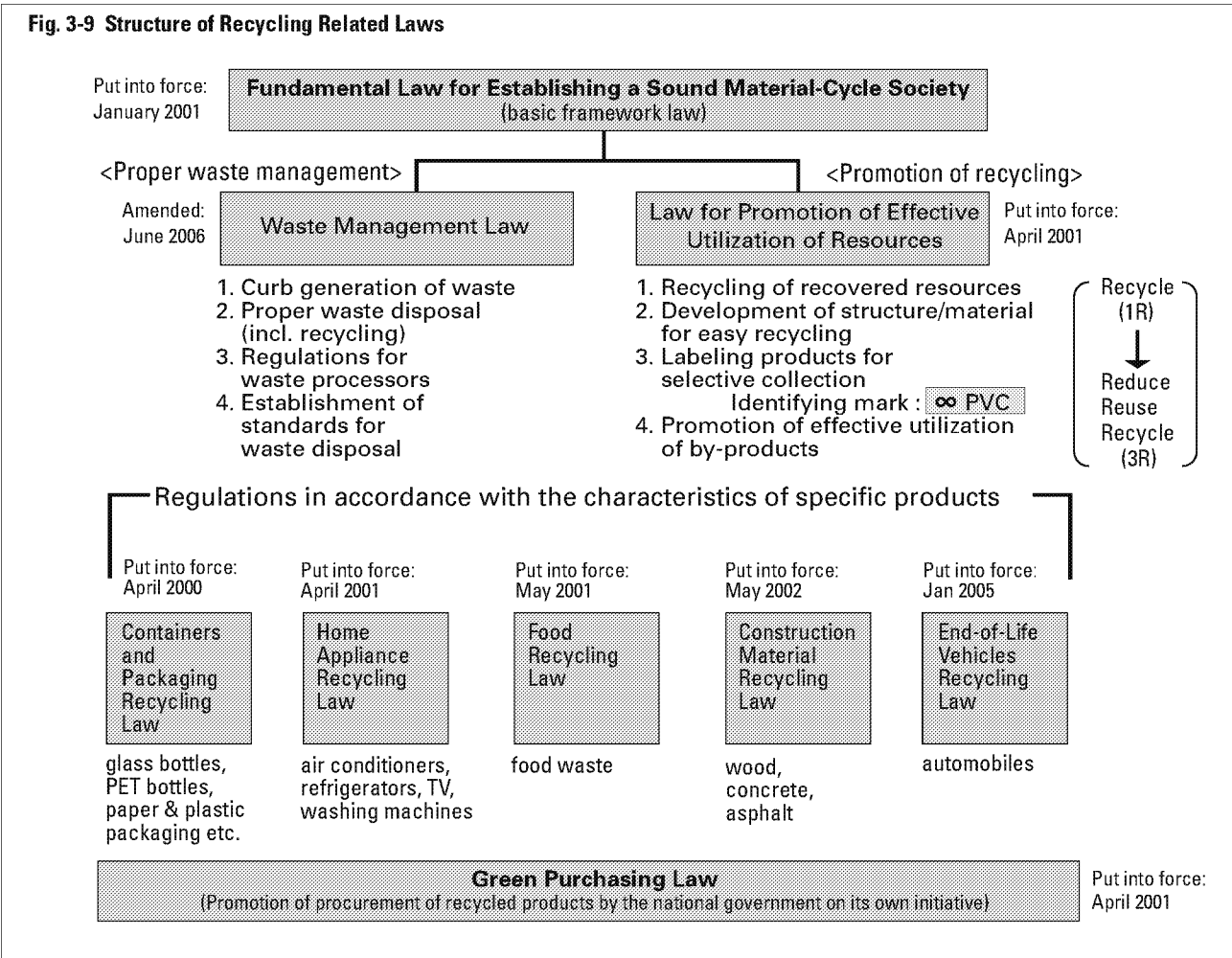
■ End-of-Life Vehicles Recycling Law
(January 2005)

The law promotes recycling of end-of-life automobiles (5 million cars per year). Collection and recycling of CFC gas, air bag and shredder dust generated in the dismantling operation of waste cars are mandatory under the law.

■ Law on Promoting Green Purchasing
(April 2001)

The law is aimed to prioritize procurement by the national and municipal governments of products and services that contribute to the reduction of environmental burdens, specified as "environment compatible products, etc.", and to promulgate information useful for such procurement system. Of the PVC products, heat insulating profiles (February 2002) and recycled rigid PVC pipes for sewage systems (February 2003) have been selected as "specified items for green procurement (for public construction projects)".

Fig. 3-9 Structure of Recycling Related Laws



**APEC Marine Debris Stakeholder Meeting:
Improving Data and Coordination and Developing New Partnerships
2 – 3 November, 2018 Bali Indonesia**

Executive Summary

Approximately 80 participants from government, academia, non-governmental organizations, multilateral development banks, impact investors, consumer goods companies, resin producers, treatment technology providers, and others convened in Bali, Indonesia November 2 – 3, 2018 to build on the 2009 APEC report on “Understanding the Economic Benefits and Costs of Controlling Marine Debris in the APEC region” and advance implementation of the 2016 APEC Policy and Practice Recommendations on Overcoming Barriers to Financing Waste Management Systems and Reducing Marine Litter and share information on partnerships, practices, and policies to reduce litter leaking into our ocean. The meeting was organized by the U.S. Department of State, the U.S. Agency for International Development (USAID), the Trash Free Seas Alliance under the auspices of the APEC Ocean and Fisheries Working Group, Chemical Dialogue, and the Virtual Working Group on Marine Debris.

Overall Policy Messages

- There is not a one-size fits all solution, localized solutions will be required.
- Improving collection systems is critical.
- There are a range of policy interventions that can be used at various stages including: regulatory instruments (e.g., regarding circularity and recyclability targets); awareness and education campaigns; pricing or fiscal instruments; operational strengthening and the funding of solid waste management systems; subsidies or grants for innovation in packaging; recycling technologies; recovery of litter and clean-ups; and enforcement of existing laws.
- APEC has been a leader on sharing information regarding enabling policies, this should include: implementing the Policy and Practice recommendations; reducing legislative and regulatory uncertainty; developing the right incentives and risk allocation structures; and maintaining public sector commitment.
- When alternative products are introduced to replace harmful materials such as plastics, the infrastructure must be in place to handle those materials; there are examples where the alternatives cause bigger environmental strains or exchange one environmental problem for another.

Incentives

- Incentives may include establishing recycling targets that include chemical recycling; including chemical recycling in renewable energy directives; creating markets to use recycled outputs; facilitating land concessions; and enabling or incentivizing the diversion of waste from landfills where appropriate.

Government Coordination

- Elements that may facilitate government coordination include regular meetings with a



**Asia-Pacific
Economic Cooperation**

legislative mandate that relevant agencies participate.

Innovative Solutions

- New financing models: Circulate Capital and Full Cycle
- New technologies to convert waste into value: Synova, Plastic Energy
- Technology incubator: Second Muse
- New technology for more effective waste collection: Gringgo
- Understanding how stakeholders are motivated: Gone Adventurin and Misool Foundation
- Empowering independent waste collectors: Enda
- Promoting thin film recycling: WRAP Program and Yayasan Bina Karta Lestari
- New models for community-based recycling: CECR and Misool Foundation
- Voluntary programs: Trash Free Waters, Mother Earth, and Divers Clean Action
- Finding innovative solutions for recycling: USAID Municipal Waste Recycling Program
- Development of Public Private Partnerships: Yayasan Bina Karta Lestari and Packaging and Recycling Association for Indonesia for Sustainable Environment (PRAISE)

Next Steps

- Expansion of VWG on Marine Debris
- Development of follow-up APEC study on marine debris



Asia-Pacific
Economic Cooperation

Meeting Summary

Session 1: Opening Remarks and Welcome

Min Kang, Project Overseer, U.S. Department of State welcomed attendees on behalf of the U.S. Department of State, U.S. Agency for International Development and the Trash Free Seas Alliance. He noted the need for regional action to address the challenge of marine litter and explained the objectives of the meeting. Specifically the meeting is aimed at promoting implementation of the 2016 APEC Policy and Practice recommendations on overcoming barriers to financing waste management systems and following up on the 2009 study regarding the costs and benefits of controlling marine debris in the APEC region. Finally, the workshop seeks to develop new partnerships between economies, at various levels of government, and with advocates and city municipal leaders.

Consul General Mark McGovern, U.S. Consulate General Surabaya congratulated Indonesia for holding the *Our Ocean Conferences* and for the strong action and leadership Indonesia has shown to address marine litter. He explained that addressing the issue of marine debris has the full support of the U.S. Congress and President as shown by the recent signing of the Save Our Seas Act of 2018. He noted that there is no single solution and that local solutions will be required for local circumstances but that the aim should be to stop marine litter at the source before it enters the marine environment.

Andreas Hutahaean, Coordinating Ministry of Maritime Affairs, Indonesia highlighted the new commitments from the 2018 Our Ocean Conference and Indonesia's goal to reduce plastic leakage by 70% by 2025. Resolving the marine litter issue is a top priority for Indonesia with President Widodo issuing directives and authorizing Indonesia's National Action Plan. Data around marine debris needs to be improved. Indonesia is working with UN, World Bank and various Indonesian agencies and universities to tackle the issue. Indonesia has developed a program FOSMAR (Fostering Actions to Tackle Marine Debris and Microplastics) to build capacity and strengthen national universities to address some of the main barriers including: unintegrated waste management, limited awareness and cross-sectoral engagement, and lack of standardized detection methodologies. Indonesia's approach includes behavior change, reduced land-based leakage, reduced sea-based leakage, enhanced law enforcement and finance and research and development.

Carrie Thompson, USAID Deputy Assistant Administrator for the Bureau for Economic Growth Education and Environment noted that the key to addressing the flow of plastic waste into the ocean is to stop it at the source – in rapidly urbanizing coastal cities where waste management systems, infrastructure, and local capacity need strengthening. This effort requires coordination between local and national governments, community organizations/NGOs, schools, researchers, informal waste collectors, and businesses along the recycling value chain. Through the Municipal Waste Recycling Program, USAID is providing grant funding for 20 marine debris projects in Indonesia, the Philippines, Sri Lanka, and Vietnam. In addition, the recent fusion of the USAID Development Credit Authority and Overseas Private Investment Corporation (OPIC) into a U.S. International Development Finance



**Asia-Pacific
Economic Cooperation**

Corporation will enable USAID to take advantage of financing options such as loans, loan guarantees, equity, and political risk insurance.

Session 2: Setting the Scene

Chever Voltmer, Plastics Director, Ocean Conservancy opened the session noting Ocean Conservancy's history with coastal cleanups. She also noted APEC's leadership on marine debris issues and the science that has been underpinning APEC's efforts.

Jenna Jambeck, Assistant Professor, University of Georgia reviewed current information regarding the import and export flows of plastic waste for recycling. She highlighted the important role that APEC economies play and the various interventions that can be made including reduction, redesign, improving waste management, and improving litter capture citing various examples of those interventions. She also reviewed some of the current global outreach programs including those from the U.S. Department of State, the World Bank, G7, G20, bilateral country engagements, prizes and global investment strategies. She concluded noting that a combination of policy, economics, and governance issues are involved which will require NGOs, academia, citizens, industry, and government working together to address material and product design, consumption, collection, treatment, and leakage issues.

Susan Ruffo, Managing Director, International Initiatives, Ocean Conservancy described Ocean Conservancy's mission and work on marine litter including the International Coastal Cleanups and the Trash Free Seas Alliance. APEC has been a key strategic forum in advancing regional efforts on marine debris through the Virtual Working Group on Marine Debris. Ms. Ruffo noted that a full range of solutions is required including reducing plastic in the waste stream, redesigning materials and products, increasing waste collection, improving recycling and cleaning up what is currently in the ocean. She highlighted the analytical basis for their work in the Stemming the Tide and The Next Wave reports and that OC has focused on collection systems as a key strategic aim. Previous APEC work including the need to systematically de-risk the waste management asset class; improve collection and sorting; improve the regulatory environment and increase the role of international finance institutions were also covered. Finally, the APEC Policy and Practice Recommendations endorsed by APEC in 2016 were reviewed.

Ryan MacFarlane, Coordinator, APEC Virtual Working Group on Marine Debris expanded on the previous descriptions of the group noting its role in sharing best practices and experiences. The group is developing tools to help economies implement the APEC Policy and Practice recommendations including a study on definitional barriers to developing waste management systems. The group is also collaborating with APEC Finance Ministers through the Asia-Pacific Infrastructure Partnership to identify and address financing barriers. Finally, the group is looking to augment its current network of government officials and private sector stakeholders to: share marine debris abatement strategies, policies, and best practices.

Session 3: Recap of the 2009 Report and Objectives for 2018-2019 Study and Report

Alistair McIlgorm, Professor, University of Wollongong, explained the background behind the 2009 APEC study which sought to improve the awareness amongst governments, communities, and industry within the APEC region of the economic implications of marine debris and provide guidance and practical advice on how to mitigate the impacts of marine debris. The study looked at the shipping, fishing, insurance, and tourism sectors and estimated the cost at \$1.265 billion per year. The new report will provide an updated assessment on the economic impacts of marine debris in APEC economies, identify urban marine debris “hot spots” that may benefit from targeted control interventions, and examine case studies on the technical effectiveness of marine litter devices such as river traps and harbor booms. A cost-benefit analysis of potential solutions and policy recommendations that may lead to reductions in the amount of litter leaking into the ocean will also be included.

Karen Raubenheimer, Professor, University of Wollongong described some of the case studies including leakage capture in Australia, collection and transportation case studies including: Ecobricks in the Philippines, fishing gear in Australia, and the ReciclApp in Chile which helps the wastepicker community. A recycling fund in Chinese Taipei was described as an example of innovative funding and Malaysia’s river of life project was described as an example of inter-ministerial cooperation. The case studies will include relevant information regarding the benefits, complexity, types and level of funding required as well as an evaluation of the potential for broader use in the APEC region.

Session 4: Individual Reports at Economy and Local Levels

Devi Dwiyantri, Ministry of Marine Affairs and Fisheries, Indonesia described Indonesia’s efforts to combat marine debris including work being done in collaboration with the World Bank to assess hotspot cities in Indonesia, work on guidelines for coastal waste management, public campaigns and awareness, and technical support and research. Specifically, work is being done to identify the source and characteristics of marine plastic debris and microplastics pollution, modeling of marine plastics debris and microplastics in Indonesian waters, the impact of marine debris, and technologies to trap marine litter.

Ryuzo Sugimoto, Director, Global Environment Bureau, Ministry of Environment, Japan explained Japan’s approach to marine litter with the basic policy established by the national government and the local governments developing regional plans. Harmonized microplastic monitoring methodologies are needed which Japan is looking to address. Japan also described the support they provide to local governments for coastal cleanup which totals \$30 million per year. Japan is focusing on reducing land-based sources of marine litter through proper waste management, promoting 3R (reduce, reuse, recycle), sustainable consumption and production, and circular economy. Japan also engages in extensive international cooperation including bilateral engagements with Vietnam, the Philippines and others on waste management. Going forward Japan will host an environment/energy ministerial meeting under the G20 in 2019 and will continue to cooperate with Southeast Asian economies on waste management and ocean monitoring.



Kevin Kim, International Affairs Specialist, KOEM, Republic of Korea explained the roles of the various ministries and agencies with the Ministry of Environment overseeing management of land-based marine debris, the ministry of ocean and fisheries working on sea-based marine debris and implementing marine debris management policies and local governments implementing marine debris clean-up projects. The National Marine Debris Management Plan covers a 5-year period (currently 2014 – 2018). Some of the issues currently being evaluated include: improving the recycling system for marine waste resources, methods for increasing the collection rate of sea-based litter, developing local capabilities, and expanding research on microplastics. The APEC capacity building program on marine debris was also described which in its second phase is looking at more policy-oriented issues including the development of an APEC Marine Debris Management Guideline which will incorporate aspects of policy development, capacity building, research and innovation, as well as financing and private sector engagement.

Session 5: The Need for New Financing Measures

Chever Voltmer, Plastics Director, Ocean Conservancy opened the session noting that through the Next Wave analysis APEC recognized early on that financing was a key issue that must be addressed and that we need new models to bring together the various stakeholders.

Delphine Arri, Senior Environmental Engineer, World Bank noted that marine litter prevention is included as one of the aims for their multi-donor trust fund PROBLUE which was designed to support the Blue Economy. The World Bank's "What a Waste" report from 2018 indicated that by 2025 the economic cost of every ton of household waste that is not collected will be \$375. Solutions must be country specific, in Indonesia the World Bank has performed a marine litter rapid hotspot assessment and is working to improve solid waste management through a \$100 Million fund designed to leverage up to \$1.2 Billion in government spending. Preventative actions include regulatory instruments (e.g. regarding circularity and recyclability targets), awareness and education campaigns, pricing or fiscal instruments, and subsidies or grants for innovation in packaging, recycling technologies, recovery of fishing gear and cleanups. The role of DFIs include helping countries establish the policy environment and infrastructure to help reduce marine litter (e.g. waste management); support for knowledge exchange platforms; technical assistance; and financing including helping to mobilize private sector financing and sovereign bonds. Multiple solutions are possible, policy changes can be immediate, solid waste management is more medium term and innovation is typically longer term. The solutions may require country specific approaches.

Rob Kaplan, Founder and CEO, Circulate Capital described the rationale for establishing Circulate Capital to help address the financing gap between the small start-ups and the large-scale investments needed. Through their investments Circulate Capital looks to help convert waste plastic to revenue. Philanthropic capital is used at the start-up stage and combined with catalytic capital to help take the innovations to scale. The work will take a suite of solutions including public policy, corporate commitment, financial



**Asia-Pacific
Economic Cooperation**

incentives, and changes in behavior.

Stew Harris, Director, Marine and Environmental Stewardship, World Plastics Council described the World Plastics Council, that plastics provide significant benefits to society and are critical to achieving the sustainable development goals but that plastics in the environment is unacceptable. A study by Trucost found that the environmental costs of plastic use in consumer goods is 3.8 times less than the alternatives. Industry is committed to developing partnerships; contributing to research; improving the recyclability, recovery, and efficiency of plastic; providing catalytic capital to de-risk investments from other sources; and working to develop pilot projects to accelerate the development of waste management infrastructure where it is needed. Implementing the Policy and Practice recommendations, reducing legislative and regulatory uncertainty, developing the right incentives and risk allocation structures and maintaining public sector commitment are important to creating an enabling environment to develop solutions.

Robert Allen, Head of APAC, FullCycle explained FullCycle's vision of developing the world's largest stakeholder community to invest in carbon negative assets. Waste is estimated to be a \$220 Billion/year market with untapped potential. In developed countries there are relatively high disposal fees and relatively inexpensive power, while in developing countries there is relatively low disposal fees and relatively expensive power. FullCycle is investing directly in companies and using blockchain technology as an accelerator of participation and impact. They have a partnership with Synova which has technology to convert many types of waste into valuable energy and have plans to invest in 150 waste-to-energy plants by 2025. Financing will be done through traditional models, a tokenized security offering, and project level co-investment opportunities. The technology can also be used at a scale appropriate for small island communities.

Session 6: Creating Enabling Environments for Technology and Innovation

Simon Baldwin, Director, SecondMuse described Secondmuse's efforts to develop an innovation ecosystem to prevent plastic from entering the ocean. The process involves identifying and understanding the stakeholders, developing an incubation curriculum, building partnerships with the stakeholders and then helping innovators develop their ideas and build a revenue stream. This work will be done in partnership the Circulate Capital.

Sumangali Krishnan, Head of Research, Gone Adventurin' described some of the research and lessons they have learned through their projects which stretch from India to the Philippines. Within each country they create and map the waste flow and value collection points. They have found that a majority of waste ends up in low waste recycling streams destroying recycling value. They have also done a lot of work on behavioral issues to better understand how various stakeholders are motivated.

Cloe Ragot, Policy Advisor, Plastic Energy presented on chemical recycling technologies which can complement mechanical recycling particularly for low value, contaminated plastics and provide a long-



**Asia-Pacific
Economic Cooperation**

term sustainable solution to the low-value plastic challenge. Some of the policy steps that can be taken to incentivize groups like plastic energy include establishing recycling targets that include chemical recycling; including chemical recycling in renewable energy directives; creating markets to use recycled outputs, facilitating the land concessions; enabling or incentivizing the diversion of waste from landfills where appropriate.

Febriadi Pratama, Co-founder, Gringgo described their pilot project in Denpasar to use technology to help waste collectors by providing information including prices for scrap materials. Their smartphone app helps organize operations and reduce inefficiencies (e.g. overlapping collectors) to make the collectors more productive. The pilot has resulted in more litter being collected and higher incomes for collectors resulting in an 80% increase in plastic recycling. Gringgo is in the process of a pre-award survey before receiving a USAID grant.

Day 2 -- 3 November, 2018

Session 7: Good Governance for Improving Solid Waste Management

Steve Morrison, US National Oceanic and Atmospheric Administration described the U.S. Marine Debris Research, Prevention and Reduction Act (reauthorized in 2018 as the Save Our Seas Act) which includes mandates to: (1) determine sources, prevent, reduce and remove marine litter; (2) provide domestic and regional coordination; (3) reduce impacts of lost fishing gear; (4) conduct outreach and education; (5) address severe marine debris events; and (6) engage internationally. The U.S. has established the Interagency Marine Debris Coordinating Committee (IMDCC) to coordinate responses, research priorities, monitoring techniques, education programs and regulatory actions. The group is chaired by National Oceanic and Atmospheric Administration; vice chaired by the U.S. Environmental Protection Agency and includes the U.S. Coast Guard, Department of State, U.S. Navy, Department of the Interior, Department of Justice and others. Recent areas of focus include: evaluating the cost of marine debris, emergency response, impacts of opening arctic sea routes, and increasing coordination of international engagement. Some of the elements that enable its success include: (1) legislative mandate to participate; (2) all relevant agencies are present at meetings; (3) reporting mechanism to the legislative body; (4) mechanism to identify new issues and opportunities; (5) required to have regular meetings.

Guilberto Borongan, Senior Program Specialist Regional Resource Center for Asia and the Pacific, Asian Institute of Technology explained AIT's role in developing the APEC Policy and Practice recommendations and the work being done in particular on recommendation #4 to streamline decision making.

John Rey Tiangco, Mayor of Navotas, Philippines (participated by video) and highlighted the issue of sachets in the environment. He noted that local authorities must also take ownership of the issue and find solutions. Educating the population as to why a particular policy is being adopted before the actual enforcement begins is also important.



**Asia-Pacific
Economic Cooperation**

Crispian Lao, Vice Chairman, National Solid Waste Management Commission, Philippines explained the Solid Waste Management Act in the Philippines which established a commission with government, private sector, and NGO participation. A challenge is that some of the key players are still missing and sometimes information is not disseminated widely enough. There is no mandatory fund and so waste management can depend on the priorities of local governments. Currently looking at ways to increase income for informal sector and transition them to the formal sector. There is interest in increasing investment from the private sector but a stable feedstock is needed and a lack of a definition for waste is impeding investment. The Philippines is currently looking at shifting from single use disposable plastics to single use recyclable plastics. Whatever products are introduced the infrastructure must be in place to handle those materials, there are examples where the alternatives cause bigger environmental strains. Finally, a multi-stakeholder, non-profit organization named Philippine Alliance for Recycling and Materials Sustainability (PARMS), composed of stakeholders throughout the waste value chain, collaboratively developed the concept of a Full Waste Recovery Program aimed at creating higher value from both recyclables and residuals and developed a business model to benefit the informal recycling sector.

Andrew Horan, International Environmental Protection Specialist, US EPA provided an overview of solid waste management in the United States. States and local government are the leads in determining the approaches to take for waste management with EPA providing national consistency through standards, guidelines, and technical support. Sustainable materials management is a systemic approach to using materials more productively over their entire lifecycle. The U.S. has focused on voluntary programs. The WRAP recycling program seeks to create opportunities for consumers to recycle plastic films. The Trash Free Waters program is a stakeholder-based, community driven approach to preventing land-based trash from entering watersheds. The U.S. is working on toolkit to help economies develop their own Trash Free Waters programs. Peru was given as an example of where such capacity building work was taking place.

Widita Vidyaningrum, Solid Waste Specialist & Consultant, USAID Municipal Waste Recycling Program described the waste management situation in Indonesia with approximately 60% of the waste consisting of organics and 14% plastic. There are questions about how waste is treated, particularly in smaller cities. Waste management is primarily the responsibility of the municipality and the private sector is typically not involved. The current strategy involves the use of landfill tipping fees and waste to energy facilities.

Nalim Mannapperuma, Director, Waste Management Authority, Western Province, Sri Lanka (*by video*) noted that waste management is overseen by the provincial authority, that 85% of waste is collected by the local government, that the public is actually happy to pay for waste disposal and that policies are changing to support the improvement and collection of rubbish.

Session 8: Public Private Partnerships



**Asia-Pacific
Economic Cooperation**

Clare Romanik, Senior Urban Specialist, USAID explained the role of USAID and the work of the Municipal Waste Recycling Program which seeks to fund organizations that can implement municipal waste recycling solutions with a focus on reducing plastics pollution of the marine environment in Indonesia, the Philippines, Sri Lanka and Vietnam. USAID is focusing its work in urban and peri-urban areas to get the biggest return on its investments in reducing marine debris. The amount of funding is \$5.5 million in grants. Thus far 20 projects have been funded.

Chandrarathna Vithanage, Senior Assistant Secretary General, Ceylon Chamber of Commerce described (through a video message) how initial attempts by the government to ban and impose a tax on plastics were met with resistance from the private sector. Through a new USAID grant, the Ceylon Chamber of Commerce is convening relevant stakeholders to develop an evidence-based approach for formulating a new policy that all stakeholders can agree with and will be supported by the private sector.

Mignonne Maramis, Secretary General, PRAISE explained the mission of the Packaging and Recycling Association for Indonesia for Sustainable Environment (PRAISE) to increase awareness that each stakeholder is responsible for waste management in an integrated way; to strengthen the capacity of packaging waste management; and to enlist government, private and public sectors to take part in reducing the impact of packaging waste on the environment. The group focuses on advocacy, research and education, and partnerships and collaboration. The Bali Bersih Program involves a variety of government ministries and mapped the waste management ecosystem in Bali identifying hotspots along rivers and coastlines. Have a variety of activities across the value chain including the development of a hub for data and promoting research on waste management related topics.

Feri Prihantoro, Yayasan Bina Karta Lestari (BINTARI) explained BINTARI's role as a NGO focused on developing sustainable communities. They are working with Indofood to incentivize the collection of low-value, single-use packaging waste. Their challenge was households create limited amounts of packaging waste which isn't economical to transport. Working together through community waste banks, they addressed some of the efficiency and cost issues in a way that made sense for the local community. BINTARI has received a grant from USAID to carry out this work.

Lalith Wickramaratne, Deputy Municipal Commissioner (Engineering Services), Colombo Municipal Council reviewed how the city of Colombo is working to fund waste management. The city has outsourced half of waste management services to the private sector and half to the public sector. Staff salaries are reimbursed by the central government. Equipment and rest is from local revenues (property tax and other incomes, parking meters) = 79% of budget for solid waste management. The private sector is mostly involved in recycling.

Ly Nguyen, Executive Director, Center for Environment and Community Research (CECR) explained how waste management is handled in Vietnam. A family (\$2) or per capita (\$0.30) fee is charged on a monthly basis which covers part of the waste management costs, government budget covers the rest.



**Asia-Pacific
Economic Cooperation**

The Vietnam Administration of Sea and Island (VASI) under the Ministry of Environment is developing a National Action Plan on Plastic Waste Management with the first consultation taking place in December and is scheduled to be finalized in the second quarter of 2019. CECR is working jointly with city environmental officials on a woman-led community-based pilot activity to separate plastic waste, other recyclables, and organic waste at the household level to reduce the waste going to city landfill. The project provides training for local leaders, technical solutions, and educational campaigns, facilitating rapid expansion of the “Clean House, Clean Hamlet, Clean Community” model. They are also doing studies on how thin plastic bags are used. CECR is supported through a USAID grant for this work.

Session 9: Inclusion in Waste Recycling Sectors

Sonia Mendoza, Chairman, Mother Earth Foundation described their work in the Philippines to change community behaviors on waste separation at source. Simple neighborhood material recovery facilities have been established which has helped to create jobs and increase compliance. The educational programs have reduced waste management costs (e.g. reduced the number of city trucks needed to collect waste) and reduced waste going to landfills.

Nguyen Thi Hoai Linh, Country Manager, Environmental Development Action in the Third World (ENDA) Viet Nam described their work on community-based waste management systems. The critical role of independent waste collectors (IWC) with local governments, the development of incentives for IWCs (healthcare and incentives for collecting low-value plastic), and the critical role of women in waste management were noted. It is difficult for IWCs to access social protections (e.g. health insurance) and thus it's often necessary to organize into cooperatives and unions. ENDA's work is supported through a USAID grant.

Swietenia Lestari, Divers Clean Action described their youth-led organization which conducts research regarding marine debris in Indonesia, works on advocacy campaigns, community development, and partnerships with industry (KFC and Danone). The group is currently working on developing waste banks, integrating independent waste collectors, and producing “Ecobricks.” These activities also serve to create employment opportunities for women and increase income. Divers Clean Action is in the process of a pre-award survey before receiving a USAID grant.

Hery Yusamandra – Misool Foundation, Indonesia described their efforts to create waste banks in West Papua. They currently have 3,743 individuals involved of which approximately 70% are women. The Misool waste banks will increase the amount of plastic being recycled from 85 metric tons (2017) to 175 metric tons (2018). Misool has a USAID grant to carry out this work.

Session 10: Breakout Sessions

Parallel sessions on public-private partnerships and supporting local governments and increasing coordination for improving solid waste management; inclusion in waste recycling (gender, youth, and



**Asia-Pacific
Economic Cooperation**

civil society groups); platforms for technology and innovation; and data collection for informing policy were held. A number of issues were discussed including:

- Gender issues and how to empower women and enable them to be more involved.
- The importance of governments establishing enabling policy environments and infrastructure to support innovations.
- Technologies (collection, segregation, treatment as well as those that can help influence behaviour and make products more efficient and recyclable).
- A recognition that more data is needed, there needs to be harmonized methodologies for collecting and using it, need more data on the role of rivers and the impacts of marine litter.
- The crucial role public-private partnerships have in improving solid waste management systems, i.e., collection, recycling, and waste treatment.

Conclusion and Next Steps

The meeting concluded with a summary of the presentations from the second day and a series of next steps for the development of the revised APEC study, this will include the study authors:

- confirming focal points within relevant APEC economy ministries;
- conducting interviews with government focal points, academia and other stakeholders;
- conducting a literature review to examine the sources of marine debris, identification of high-leakage areas/cities, and the contribution of the marine sector to APEC economies on a per economy basis;
- examining the costs of marine debris and poor waste management based on calculations from the latest publications;
- following up with government officials;
- researching case studies;
- drafting report and publication (June – December, 2019)

Additional Information

Presentations from the meeting may be found here:

<https://www.dropbox.com/sh/4pfria2qvzvyqq4/AADOYs8zoWkl-UO5VhBJ-4yQa?dl=0>

Photos from the meeting may be found here:

https://www.dropbox.com/sh/qj2qhatstlq090m/AAA6_xQS8f9gZ5F0hynPlwzVa?dl=0

Annex A: Meeting Agenda

Annex B: Speaker Biographies

Annex C: Meeting Participants



APEC Marine Debris Stakeholder Meeting: Improving Data and Coordination and Developing New Partnerships

Date: November 2 - 3, 2018

Location: Inuya Putri Resort, Nusa Dua, Bali, Indonesia

Purpose of event:

The purpose of this event is to take stock of the improved scientific knowledge and changed economic landscape since the publication of the 2009 Report on the Economic Costs of Marine Debris to APEC Economies, and build on the report to promote new partnerships and coordination among public and private stakeholders. The discussions will focus on strategic implementation of the 2016 APEC Policy and Practice Recommendations on Overcoming Barriers to Waste Management Finance towards coordinated innovative policy, financing and technology solutions. The meeting will also build public and private partnerships and networks, as well as establish points of contact for the study to update the 2009 report.

2 November, 2018	
8:30 – 9:00	Registration and arrival
Session 1: Opening Remarks and Welcome	
9:00 – 9:30	<p><u>Opening remarks and welcome</u></p> <p>This session will briefly welcome attendees and address the objectives and expected outcomes for the meeting.</p> <p>Moderator: Min Kang, Project Overseer, U.S. Department of State</p> <ul style="list-style-type: none"> - Consul General Mark McGovern, U.S. Consulate General Surabaya, Indonesia - Andreas Hutahaean, Coordinating Ministry of Maritime Affairs - Carrie Thompson, USAID Deputy Assistant Administrator for the Bureau for Economic Growth, Education and Environment
Session 2: Setting the Scene	
9:30 – 10:15	<p><u>Setting the scene</u></p> <p>This session will provide a brief introduction of the current landscape and previous work conducted through the APEC Ocean and Fisheries Working Group and the APEC Virtual Working Group on Marine Debris, focusing on the APEC Policy and Practice Recommendations endorsed by APEC ministers in 2016.</p>

	<p>Moderator: Chever Voltmer, Plastics Director, Ocean Conservancy</p> <p>Speakers:</p> <ul style="list-style-type: none"> • Dr. Jenna Jambeck, Assistant Professor, University of Georgia • Susan Ruffo, Managing Director, International Initiatives, Ocean Conservancy • Ryan MacFarlane, Coordinator, APEC Virtual Working Group on Marine Debris (VWGMD) <p><i>Question and Answer Session</i></p>
10:15 – 10:45	Coffee Break and Group Photo
Session 3: Recap of the 2009 Report and Objectives for 2018-2019 Study and Report	
10:45 - 11:15	<p>This session will discuss the role of sufficient and accurate data to inform policy makers; recap the background and context of the 2009 APEC Report and discuss the expansion of knowledge since the report's publication. The session will specifically look at several of the recommendations contained in the 2009 report and discuss the goals of the 2018-2019 study to update the economic costs of marine debris to APEC economies.</p> <p>Moderator: Karen Raubenheimer/Alistair McIlgorm, University of Wollongong, 2018 Study Contractors</p> <p>Speakers:</p> <ul style="list-style-type: none"> • Prof. Alistair McIlgorm, Professor, University of Wollongong • Dr. Karen Raubenheimer, Lecturer, University of Wollongong <p><i>Question and Answer Session</i></p>
Session 4: Individual Reports at Economy and Local Levels	
11:15 – 12:30	<p>This session will provide an overview of the 2009 APEC Report and 2018 Study followed by several individual reports at economy and local levels.</p> <p>Moderator: Karen Raubenheimer, Lecturer, University of Wollongong</p> <p>Speakers:</p> <ul style="list-style-type: none"> • Dr. Devi DwiYanti, Ministry of Marine Affairs and Fisheries, Indonesia • Ryuzo Sugimoto, Director, Global Environment Bureau, Ministry of Environment, Japan • Kevin Kim, International Affairs Specialist, KOEM, Republic of Korea <p><i>Question and Answer Session</i></p>

12:30 – 14:00	Lunch
Session 5: The Need for New Financing Measures	
14:00 – 15:00	<p>This session will discuss the new and innovative funding approaches required to address financing gaps and improve waste management and look at current spending levels as well as measures from governments and development finance institutions to increase that support. The session will also provide examples of the partnerships and innovative funding models.</p> <p>Moderator: Chever Voltmer, Plastics Director, Ocean Conservancy</p> <p>Speakers:</p> <ul style="list-style-type: none"> ● Delphine Arri PhD, Senior Environmental Engineer, World Bank ● Rob Kaplan, Founder and CEO, Circulate Capital ● Stewart Harris, Director, Marine and Environmental Stewardship, World Plastics Council ● Robert Allen, Head of APAC, FullCycle <p><i>Question and Answer Session</i></p>
15:00 – 15:30	Coffee
Session 6: Creating Enabling Environments for Technology and Innovation	
15:30 – 16:30	<p>This session will cover new technologies being developed to enable economies to recover more waste and economic value as well as other solutions advancing public awareness and community outreach. Several case studies will illustrate these new technologies and the policy environment that is required for those innovative solutions to be implemented.</p> <p>Moderator: Andrew Bassford, CEO, Marine Change</p> <p>Speakers:</p> <ul style="list-style-type: none"> ● Simon Baldwin, Director, SecondMuse Indonesia ● Sumangali Krishnan, Head of Research, Gone Adventurin' Pte. Ltd. ● Cloe Ragot, Policy Advisor, Plastic Energy ● Febriadi Pratama, Co-founder, Gringgo <p><i>Question and Answer Session</i></p>
Day 1 Recap	

16:30 – 17:00	<p>This session will summarize the first day's sessions and preface Day 2 discussions, including the need for local actions and economic inclusion.</p> <p>Moderator: Karen Raubenheimer, Lecturer, University of Wollongong</p>
3 November, 2018	
Session 7: Good Governance for Improving Solid Waste Management	
8:30 - 9:00	<p>Registration and arrival</p> <ul style="list-style-type: none"> - Attendees confirm participation in small groups (session 10)
9:00 – 10:30	<p><u>Lateral and Vertical Coordination</u></p> <p>This session will discuss the need for coordination between stakeholder government ministries (lateral coordination) and between economy and local levels (vertical coordination) and offer examples of good governance that has improved management of solid waste.</p> <p>Moderator: Karen Raubenheimer, University of Wollongong</p> <p>Speakers:</p> <ul style="list-style-type: none"> • Steve Morrison, US NOAA • Guilberto Borongan, Senior Program Specialist Regional Resource Center for Asia and the Pacific, Asian Institute of Technology • Video: John Rey Tiangco, Mayor of Navotas, Philippines • Crispian Lao, Vice Chairman, National Solid Waste Management Commission, Philippines • Andrew Horan, International Environmental Protection Specialist, US EPA • Widita Vidyaningrum, Solid Waste Specialist & Consultant, USAID Municipal Waste Recycling Program • Video: Nalim Mannapperuma, Director, Waste Management Authority, Western Province, Sri Lanka <p>Question and Answer Session</p>
10:30 – 11:00	Coffee
Session 8: Public Private Partnerships	
11:00 – 12:30	<p>This session will highlight successful partnerships, challenges faced by local advocates, and ways to improve communication and facilitate holistic approaches.</p> <p>Moderator: Henri Disselkoen, USAID MWRP Chief of Party, Development Innovations Group</p>

	<p>Speakers:</p> <ul style="list-style-type: none"> ● Video: Chandrarathna Vithanage, Senior Assistant Secretary General, Ceylon Chamber of Commerce ● Mignonne Maramis, Secretary General, PRAISE ● Feri Prihantoro, Yayasan Bina karta Lestari, Bintari ● Video: Lalith Wickramaratne, Deputy Municipal Commissioner (Engineering Services), Colombo Municipal Council ● Ly Nguyen, Executive Director, Center for Environment and Community Research (CECR) <p><i>Suggestions and Q&A to speakers</i></p>
12:30 – 13:30	Lunch
Session 9: Inclusion in Waste Recycling Sectors	
13:30 – 15:00	<p>This session will address the role of women, youth and vulnerable populations in the waste sector and ways to incentivize the informal sector.</p> <p>Moderator: Clare Romanik, Senior Urban Specialist, USAID Office of Land and Urban</p> <p>Speakers:</p> <ul style="list-style-type: none"> ● Sonia Mendoza, Chairman, Mother Earth Foundation ● Nguyen Thi Hoai Linh, Country Manager, Environmental Development Action in the Third World (ENDA) Viet Nam ● Swietenia Lestari, Divers Clean Action ● Hery Yusamandra, Misool Foundation <p><i>Question and Answer Session</i></p>
15:00 – 15:30	Coffee: Project meeting evaluation forms
Session 10: Open Space - Small Group Discussions on Selected Topics	
15:30 – 16:30	<p>This session will have 3-5 parallel discussions, with approximately 10-20 participants in a small group. Participants indicate their preference for a particular session during lunch. The proposed sessions and moderators are:</p> <ul style="list-style-type: none"> ● Public-private partnerships (Henri Disselkoen) ● Inclusion in waste recycling (gender, youth, and civil society groups) (Bryan Winston) ● Supporting local governments and increasing coordination for improving solid waste management (Clare Romanik)

	<ul style="list-style-type: none"> • Platforms for technology and innovation (Keondra Freemyn) • Data collection for informing policy (Karen Raubenheimer) <p>Overall moderators: USAID</p>
Session 11: Summary and wrap-up	
16:30 – 17:00	Recap and next steps: Karen Raubenheimer , University of Wollongong

APEC Marine Debris Stakeholder Meeting: Improving Data and Coordination and Developing New Partnerships

2 November, 2018

Session 1: Opening Remarks and Welcome



Mark McGovern

Consul General
US Consulate General Surabaya

Mark McGovern leads a consulate team for the U.S. Mission in diplomatic engagements in the 12 provinces of eastern Indonesia - over a third of Indonesia's population. Prior to this assignment, Mark served as the Countrywide Consular Coordinator for the U.S. Mission to Vietnam, based in Ho Chi Minh City. Mark joined the Department of State as an officer in 2002, with previous assignments to Japan, Saudi Arabia, China, Afghanistan, and Pakistan. He also has worked in the Counterterrorism office and the

Bureau of Consular Affairs in Washington, DC. Prior to these assignments, Mark was also a U.S. Diplomatic Courier based in Korea and Germany.

Before joining the U.S. Department of State, Mark worked for several years with the former Immigration and Naturalization Service in Honolulu, Montreal, and Washington. Mark's previous experiences also include stints as a high school economics teacher, computer software trainer, Wienermobile driver, and as an entrepreneur doing on-the-road promotions for several large American companies. Mark was born, raised, and graduated university in his home state of New Jersey.



Andreas Hutahaeen

Deputy Director, Maritime Industry Empowerment
Coordinating Ministry of Maritime Affairs, Indonesia

Prior to his current position, Andreas Hutahaeen was a scientist at the Agency for Research and Development of Marine and Fisheries. Since 2011, he is active in developing the Coastal-Ocean Climate Change program, in particular on Blue Carbon & Coastal livelihood, and receiving grants from institutions such as Gesellschaft für Internationale Zusammenarbeit (GIZ),

The World Bank, The Global Environment Facility (GEF) and the Science and Technology Research Partnership for Sustainable Development (SATREPS) JICA-JST.

As the coordinating minister, one item of his portfolio is about marine plastic debris, in particular for the establishment of a national plan of action in combating marine debris and supervising some projects related to it. Andreas holds a Ph.D. in Oceanography (Marine Biogeochemistry) from University of Nagoya-Japan in 2010 and MSc in Marine Chemistry from the University of Bremen-Germany in 2002.



Carrie Thompson

Deputy Assistant Administrator
Bureau of Economic Growth, Education and Environment (E3), USAID

Ms. Thompson oversees the work of the Global Climate Change, Forestry and Biodiversity, Land and Urban and Energy and Infrastructure Offices, as well as the Multilateral Development Bank Team for Social/Environment Safeguards. Before returning to Washington she served as Deputy Director of USAID's Regional Development Mission for Asia based in Bangkok, Thailand, where she provided oversight on regional programs that address trans-boundary challenges such as infectious diseases, human and wildlife trafficking, economic integration and shared use of natural resources, and on bilateral programs in China, Thailand, and Laos.

Additional prior assignments include Director of Program Analysis, Implementation, Communication and Outreach for E3 (2009-2011), Director for East African Affairs (2007-2009), and Program Office Director for Guatemala and Central America Programs (2001-2006). She also served in USAID missions in Peru (1997 – 2001) and El Salvador (1993 – 1997). Prior to joining USAID, she worked for the Overseas Private Investment Corporation in Washington and various international trade and finance firms.

Ms. Thompson holds an M.S. in national security strategy from the National War College (2007); an M.A. in international business, trade and development economics from the Fletcher School of Law and Diplomacy (1988); and a B.A. in American studies from Northwestern University.

Session 2: Setting the Scene



Chever Voltmer

Plastics Director
Ocean Conservancy

Chever X. Voltmer joined Ocean Conservancy as the Director for Plastics Initiatives in September 2018. Previously, she worked at the Office of Ocean and Polar Affairs at the Department of State, where she was the lead for international marine debris issues, overseeing U.S. engagement on this issue in the United Nations, G7, G20, APEC, ASEAN, and other fora. A retired career member of the Foreign Service, Chever served overseas in Poland, Guyana, Russia, Ecuador, Bosnia and Herzegovina, Ukraine, and Estonia. She also spent a year as the Director for Central America and the Caribbean at the Office of the U.S. Trade Representative. Chever holds undergraduate degrees in economics and Russian Studies and holds an M.S. from the National War College, where she was a Distinguished Graduate.



Jenna Jambeck

Associate Professor
College of Engineering, University of Georgia

Jenna Jambeck is internationally recognized for her research on plastic waste in the ocean and for the Marine Debris Tracker app she co-created with fellow faculty member Kyle Johnsen. She notes that being active in research helps bring current environmental engineering issues into the classroom for students. Learn more about Dr. Jambeck's teaching and research in Focus on Faculty.



Susan Ruffo

Managing Director, International Initiatives
Ocean Conservancy

Susan Ruffo leads Ocean Conservancy's global efforts to promote a healthy ocean, on issues such as ocean acidification, marine plastics, and climate change. Previously, Susan led the Vibrant Oceans portfolio for Bloomberg Philanthropies, supporting simultaneous reform of local and industrial-scale fisheries and development of financial strategies to ease the transition to sustainable fishing. From 2011 to 2015, Susan served as Associate Director for Climate Preparedness at the White House Council on Environmental Quality. There she led development and implementation of the climate preparedness pillar of President Obama's Climate Action Plan and worked with state, local, and tribal leaders to better prepare the United States for the impacts of climate change. Susan has also worked at The Nature Conservancy and as a Foreign Service Officer with the U.S. Department of State, serving in China, Argentina, and Nigeria and in Washington D.C. Susan has degrees in Economics and Political Science from the Massachusetts Institute of Technology.



Ryan MacFarlane

Director
C&M International

Ryan helps companies, industry associations, academic institutions, and non-governmental organizations develop productive public-private partnerships. He currently serves as coordinator for the Asia-Pacific Economic Cooperation (APEC) Virtual Working Group on Marine Debris, advisor to the APEC Life Sciences Innovation Forum, and a sherpa for initiatives under the Asia-Pacific Financial Forum. Prior to joining C&M International Ryan was the Principal APEC Coordinator at the U.S. Department of State.

Prior to joining the Department of State, Ryan was awarded an American Association for the Advancement of Science (AAAS) Science and Technology Policy Fellowship and served as an international health specialist at the Department of Homeland Security, Office of Health Affairs. Earlier

in his career Ryan worked at the National Oceanic and Atmospheric Administration (NOAA). Ryan's work within the government has been recognized with multiple meritorious and superior honor awards.

Ryan earned a B.S. with Honors in Cellular, Molecular and Developmental Biology from the University of New Hampshire and a Ph.D. in Microbiology and Immunology from Stanford University School of Medicine where he was awarded the Sidney Raffer Award for Outstanding Accomplishment in Graduate Study.

Session 3: Recap of the 2009 Report and Objectives for 2018-2019 Study and Report



Karen Raubenheimer, PhD

Lecturer

University of Wollongong

Karen Raubenheimer obtained her Ph.D. from the Australian National Centre for Ocean Resources and Security (ANCORS). Her thesis, titled "Towards an Improved Framework to Prevent Marine Plastic Debris," analyzed international and regional policy measures to prevent ocean- and land-based sources of plastic pollution. Karen was the lead author of the UN Environment assessment titled Combating marine plastic litter and microplastics: An assessment of the effectiveness of relevant international, regional and subregional governance strategies and approaches (UNEP/EA.3/INF/5). Options for addressing policy gaps were identified, which Karen presented at the UN Environment Assembly meeting in December 2017.

Karen conducted two additional assessments for UN Environment. The marine litter action plans of the UN Regional Seas were assessed and guidelines developed to assist the design of new action plans for marine litter and the revision of existing action plans. In addition, the indicators for calculating the costs of marine litter at the national level were identified to assist governments in determining the benefits of preventive versus remedial action.



Alistair McIlgorm

Professor

Australian National Centre for Ocean Resources and Security (ANCORS),
University of Wollongong

Professor McIlgorm specializes in marine and fisheries economics, management and capacity development. His 30-year career in fisheries and the Australian marine sector has been with the Australian Maritime College, Principal of Dominion Consulting Pty Ltd and Director of the National Marine Science Centre (2005-2010).

He pioneered fishery management short course training and has trained many fishery administrators, managers and stakeholders in Australia, and also from 80 countries in the Asia-Pacific, Caribbean, Africa and the Indian Ocean rim, under the Australian Aid program. He has completed over 60 fisheries management projects with Australian government agencies and with a range of international organizations (UNEP, FFA, PEMSEA, and Packard Foundation).

He has numerous journal and peer-reviewed research reports including, “Measuring Marine Economies” (APEC 2004), “Understanding the Economic costs and benefits of controlling marine debris” (APEC 2009) and was a joint author of the Marine Litter governance assessment report to UNEP-UNEA in late 2017. He is a board member of the Journal of Ocean and Coastal Economics, Monterey.

Session 4: Individual Reports at Economy and Local Levels



Karen Raubenheimer, PhD

Lecturer
University of Wollongong

See previous full bio



Ryuzo Sugimoto

Director, International Cooperation and Sustainable Infrastructure
Ministry of Environment, Japan

Ryuzo Sugimoto is in charge of international cooperation with Asian and African countries, and sustainable development goals in the environmental aspect. He joined MOEJ since 1999 and has over 15 years of experience in various aspects of environment and sustainable development, including climate change, 3R, Chemicals, and EIA in Japan. Prior to this position, Mr. Sugimoto transferred to Asian Development Bank temporarily for 3 years and 9 months and established a new trust fund, the Japan Fund for Joint Crediting Mechanism (JFJCM) in ADB, which supports ADB projects to introduce advanced low carbon technology.

Mr. Sugimoto holds a Master’s degree in Public Affairs from School of Public and Environmental Affairs, Indiana University, USA (2008); and a Master’s (1999) and Bachelor’s (1997) degrees in Civil Engineering from the University Of Tokyo, Japan.



Kevin Kim

International Affairs Specialist
Korea Marine Environment Management Corporation (KOEM)

Kevin Kim is currently an International Affairs Specialist at KOEM, which protects the health and livelihoods of its citizens through a systematic response system in the event of oil spills, conducts national projects maintaining sustainability of marine ecosystem services including the national investigation of the marine ecosystem, designation and management of Marine Protected Areas (MPAs), and collects marine debris and treats bilge

waste.

Mr. Kim holds a BA in Political Science from the Johns Hopkins University, MA in International Development and Cooperation from Korea University and is currently working on his Ph.D. from Hankuk University of Foreign Studies focusing on ASEAN studies. Mr. Kim has worked at KOEM for 7 years providing consultation for the Ministry of Oceans and Fisheries in regards to domestic and international policy recommendations for cooperation with APEC, UNEP COBSEA and NOWPAP, PEMSEA, bilateral and multilateral meetings as well as developing various projects and organizing APEC funded events. In addition, he has organized various international workshops and training programs for developing economies in areas such as marine environment management, oil spill response, marine debris management, and other issue areas.

Session 5: The Need for New Financing Measures



Chever Voltmer
Plastics Director
Ocean Conservancy

See previous full bio



Delphine Arri, PhD
Senior Environmental Engineer, Environment and Natural Resources
World Bank

Delphine Arri started her career in environmental consulting in France, leading projects in solid waste and pollution management for private companies and local governments, and in 2009 she became director of her regional business unit. In 2012 she started to work as an independent for international institutions such as the International American Development Bank and the World Bank Group, as a waste management expert or a specialist in environment and social safeguards. She worked four years in IFC, advising governments and private companies to develop infrastructure projects whilst avoiding, minimizing and compensating for environmental and social impacts. She joined the Global platform of the World Bank ENR practice in December 2017 to support the WB pollution management and environmental health program, and develop specifically a program on marine pollution, including plastic pollution, as part of the broader blue economy agenda. Delphine studied Geology and Earth sciences in Ecole Normale Supérieure, Paris, and holds a Ph.D. in Geochemistry and Hydrogeology from Mines Engineering School in Paris.

**Rob Kaplan**

Founder and CEO
Circulate Capital

Rob Kaplan is Founder and CEO of Circulate Capital, an impact investment management firm dedicated to financing companies, projects, and infrastructure that prevent the flow of plastic waste to the world's ocean and advance the circular economy. He is also a Co-Founder of and Senior Advisor to Closed Loop Partners, which deployed more than \$40M into recycling and circular economy investment opportunities in North America; previously as Managing Director, Rob oversaw strategy and new business model development, as well as day-to-day operations.

Rob also served as Director of Sustainability for Walmart Stores, Inc. where he was responsible for packaging, customer engagement, and integration with the Consumables business, including personal care and household cleaning, leading the company's cross-functional efforts to eliminate 20 million metric tons of greenhouse gas from the supply chain.

Rob received his MBA from the Haas School where he studied marketing, corporate responsibility, and social entrepreneurship. He received his undergraduate degree in political communication from the George Washington University where he learned that perception is reality.

**Stewart Harris**

Director, Marine and Environmental Stewardship
World Plastics Council

Stewart Harris is the Director of Marine and Environmental Stewardship at the American Chemistry Council's (ACC) Plastics Division where he manages ACC's Marine Debris program. He is also Chair of the plastics industry's Global Action Team, which implements the Declaration of the Global Plastics Associations for Solutions on Marine Litter. As part of the Global Declaration, 75 signatories from 40 countries have implemented over 350 projects addressing marine litter since 2011. Stewart also represents the World Plastics Council (WPC) at international meetings. WPC is an organization comprised of leading companies that produce plastic resin and seeks to promote sustainability and the responsible use of plastics. Stewart has a Master of Science in Marine-Estuarine Environmental Science from the University of Maryland and a Bachelor of Science in Biology from Bucknell University.

**Robert Allen**

Head of APAC
FullCycle Management LLC

Robert Allen is the Head of Technology for FullCycle Management LLC, an impact investment business focused on low carbon solutions and, in particular, on waste to energy technology to tackle the issues of oceanic waste plastic. FullCycle have a mission to democratize access to investment in infrastructure projects and now are planning to raise their next fund using blockchain technology to issue tokenized securities to retail investors globally.

Robert has been building financial services technology for over 20 years and is a specialist in the delivery of Payments and Blockchain-based systems. He led PwC's fintech practice in Australia and is on the board of a number of sustainable development related startups. He is also a board member of the Australian Payments Council and the Australian Digital Commerce Association - the country's industry body for blockchain and cryptocurrency businesses.

Robert is the co-author of "Fintech Revolution: Universal inclusion in the new financial ecosystem" and is also working with the Asian Development Bank to define a fintech strategy for the South Pacific islands.

Session 6: Creating Enabling Environments for Technology and Innovation



Andrew Bassford

CEO

Marine Change

Andrew Bassford's experience spans both commercial and policy-making settings in Europe and Southeast Asia. As Director of Operations for Fishes, Europe's first certified sustainable seafood products company, he managed all sourcing and market development for this pioneering European fish brand that specialized in MSC certified fish. Over the past six years, Andrew has been at the forefront of a range of public and private sector efforts to drive the development of sustainable seafood supply chains. He has undertaken projects for development finance institutions (World Bank, Asian Development Bank, FAO), Asian Governments (Indonesia), and multi-stakeholder initiatives such as the Dutch Sustainable Trade Initiative and Fairtrade. Andrew was part of the founding team involved in creating the International Pole and Line Foundation, which encourage low- impact fishing strategies that benefit ecosystems and local communities.



Simon Baldwin

Director

SecondMuse Indonesia

Simon is the director of SecondMuse Indonesia, a collaboration agency that builds innovation ecosystems to help source, support and scale novel business ideas to market. Before joining SecondMuse, Simon worked on a range of public health and human rights issues across the globe. Along the way, he has also founded several companies. Simon's work currently focuses on exploring how companies can be supported to develop solutions to complex social and environmental problems. In addition to leading SecondMuse in Indonesia, Simon is undertaking his Ph.D. at the Royal Melbourne Institute of Technology's College of Business.

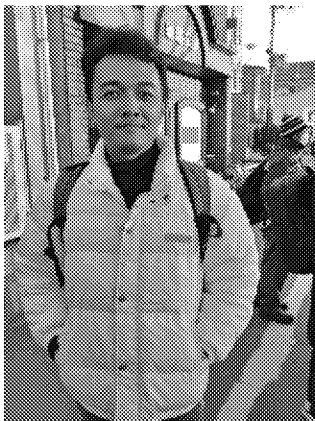


Sumangali Krishnan

Head of Research
Gone Adventurin Pte. Ltd.

Sumangali Krishnan has developed and led various research, policy and on-ground projects aimed at exploring a Circular Economy framework for Asia. Following a career in corporate law, both in private practice and more recently, in start-ups and emerging businesses, Sumangali is currently following her passion for sustainability with her role at GA.

Sumangali has a J.D. in Law and a Masters in Economics and has lived and worked in the United States prior to moving to Singapore. She is particularly interested policy, legislation and business-led interventions as a solution to resource management in Asia.



Febriadi Pratama

Co-founder
Gringgo

Febriadi Pratama is a graduate of Indonesia's top technical university ITB, majoring Interior Design, and has over 5 years of experience in system development, business development, and product development. Previous experiences include web development, building startups, working at several medium to large corporations and as a National Startup Mentor for Business & Product Development. At Gringgo, Febriadi is responsible for decisions on technology usage, supervising daily operations, leading the R&D team, and creating Gringgo's business strategy and development

3 November, 2018

Session 7: Good Governance for Improving Solid Waste Management



Karen Raubenheimer, PhD

Lecturer
University of Wollongong

See previous full bio



Guilberto Borongan

Senior Program Specialist
Regional Resource Center for Asia and the Pacific, Asian Institute of
Technology

Guilberto Borongan He is involved in the development of national/city waste management and 3R strategies for the developing countries of Asia as well as the APEC policy and practices recommendations on marine litter; and UNEP funded projects on ASEAN mercury waste, among other related waste management and 3R projects. He has intensive experience in building capacities for local governments and providing technical assistance to partners at both national and regional levels on waste management.

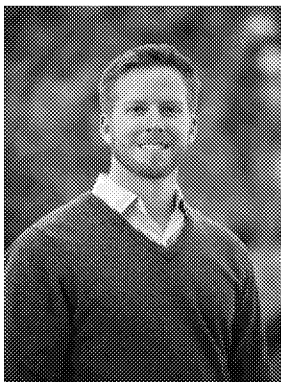
Mr. Borongan was engaged in the regional policy development and advocacy on the environment and health of the WHO-UNEP Ministerial Regional Forum in 14 Southeast and East Asian countries. Before joining RRCAP, he served as Assistant to the Director from 2000 to 2002 with the Asia Europe Environmental Technology Center under the Asia Europe Meeting (ASEM). Mr. Borongan is a Chemical Engineer by profession and holds a Master degree in Urban Environmental Management.



Crispian Lao
Vice Chairman
National Solid Waste Management Commission

Commissioner Crispian Lao is the Vice Chairman of the National Solid Waste Management Commission under the Office of the President, Republic of the Philippines, as the Private Sector Representative for the Recycling Industry and is a Co-Convener and Founding President of the Philippine Alliance for Recycling and Material Sustainability (PARMS) which brought together stakeholders in the recycling value chain (Manufacturers, Industry Groups, Retail Groups, MRFS/Junkshops/Waste Consolidators & Haulers, Recyclers, NGOs, Academe and Government Entities) whose objective is to “Develop and Implement a Holistic & Comprehensive Program to Increase Resource Recovery and Reduce Landfill Dependence towards Zero Waste”.

Within APEC, Mr. Lao also serves as the Co-Chair and Industry Sector Representative to the APEC Virtual Working Group on Marine Debris. He is a technical working group member of the Climate Change Commission; board member of the Solid Waste Management Association of the Philippines; and part of the expert panel that will develop a Global Roadmap to Achieve Near Zero Ocean Plastic Leakage by 2040.



Andrew Horan
International Environmental Protection Specialist
US EPA

Andrew Horan is responsible for broad multilateral marine pollution policy development for the Agency, with a heavy focus on marine litter and plastics. He co-leads EPA’s international Trash Free Waters work on the ground in Peru, Jamaica, Panama, Canada, and Mexico from initial engagement to project completion. He also leads, as part of a team, EPA direct engagement with the United Nations on marine litter and plastics issues.

Prior to EPA, Andrew served as Peace Corps Volunteer in the Philippines working on sustainable fisheries matters with local fishing communities as well as with the local government on marine litter and plastics issues. He holds an M.S. degree in Geography from the University of Florida and a B.S. in Earth and Atmospheric Science from Georgia Institute of Technology.



Widita Vidyanigrum
Solid Waste Specialist, Consultant
USAID Municipal Waste Recycling Program

Widita Vidyanigrum is a professional working in the area of Solid Waste Management in Indonesia with numerous experiences working for international development agencies. Currently, she is the Country Liaison of Indonesia for USAID Municipal Waste Recycling program and the National Consultant for Resource and Energy Recovery from Organic Waste in Indonesia, a Strategic Sector Cooperation between Indonesia and Denmark. Starting 2016, she actively involves in the preparation of a World Bank project "Improvement of Solid Waste management to Support Regional and Metropolitan Cities"

together with related ministries in the waste sector. Prior to that, she worked at a consulting company focused in Sustainable Waste Management, as an Expert Associate and Program Manager, where she gained an opportunity to lead the coordination of Baseline Survey for Waste to Energy project in several Indonesian cities, initiated by UN ESCAP partnership with UCLG ASPAC. She has been involved in Waste Sector since 2008, where she worked as Research Assistant at Indonesian Solid Waste Association and then became a member of the association since then.

Session 8: Public-Private Partnerships



Mignonne Maramis

Secretary General

Packaging and Recycling Association for Indonesia Sustainable Environment (PRAISE)

Mignonne N.B. Maramis is Secretary General of the Packaging and Recycling Association for Indonesia Sustainable Environment (PRAISE), an association founded by six companies—Coca-Cola, Danone, Indofood, Nestlé, Tetra Pak, Unilever—which actively supports holistic and sustainable waste management solutions in Indonesia. Mignonne is also the founder of DaurEsia Jaya Trimegah, a company specializing in recycled products made entirely from post-consumer cartons.

Prior to joining PRAISE, Mignonne was Communications Director for Tetra Pak Indonesia, where she worked for over 17 years as Communications Manager, Director, and later as regional Communications Leader for South and Southeast Asia. In addition, Mignonne established and led Tetra Pak Indonesia's Environment division, serving concurrently as Communications and Environment Director.

Mignonne initiated Indonesia's first beverage carton recycling program in 2004, in partnership with a government research institute, Center for Pulp and Paper, local paper mills, waste collection partners and Tetra Pak Indonesia's customers. Tetra Pak's recycling program received the first Sustainable Producer award from the Indonesia Ministry of Environment and Forestry in 2016 for minimizing packaging waste. She also facilitated the launch of Forest Stewardship Council® (FSC®) labelling on Tetra Pak cartons in Indonesia, which ensures that the paperboard comes from responsibly managed forests.



Feri Prihantoro

Director

Yayasan Bina karta Lestari, BINTARI

Feri Prihantoro has worked in solid waste management since 2006 with composting program in the community. Since 2016, BINTARI has cooperation with Indofood to enhance plastic waste reduction, particularly low-economic plastic. Bintari recently signed an agreement with USAID's Municipal Waste Recycling Program to reduce plastics waste through extended stakeholder responsibility particularly private sector. Feri will be a project manager to ensure the goals can be achieved. The project will work with communities, private and government to collect the recyclable waste to fifty new recyclable collection/transport facilities and selected companies to facilitate the easier collection of package materials.



Nguyen Ngoc Ly

Executive Director

Center for Environment and Community Research (CECR)

Ms. Nguyen Ngoc Ly is founder and director of CECR, a local NGO in Hanoi. The Center is advocating for participatory and inclusiveness in the implementation of SDGs, environmental governance and climate change, focusing on improvement of a legal framework to protect clean water, improvement of solid waste management, promotion of greater women role in environmental protection, and creating youth leader network in environmental protection.

In Viet Nam, at the local level, currently CECR is working with the local authorities, women groups and communities to implement project Ocean without Plastics: Community-based Waste Recycling for a strong community and healthy city in Danang. The project promotes the active participation of women, men, youth, business, fishermen in managing waste at source, implementing different models to reduce of plastic use, segregate of plastic waste, composting of organic wastes.

Ms. Ly received MPA from Harvard Kennedy School, MLS from Maryland University, and MEng in Environmental Management and Technology from Asian Institute of Technology, Thailand. She got her engineering degree from Prague College of Chemical Technology, Czech Republic.

Session 9: Inclusion in Waste Recycling Sectors



Clare Romanik

Senior Urban Specialist

USAID Office of Land and Urban

Clare Romanik is the Agency's lead expert on marine plastics pollution and manages USAID's Municipal Waste Recycling Program in Indonesia, Philippines, Vietnam, and Sri Lanka. Ms. Romanik also leads the Agency's work in Urban Assessments and mobilizing domestic resources in urban areas. Prior to joining USAID, Clare was Local Governance Policy Specialist with UNDP (2010-2013), advising 22 Country Offices. As Senior Associate at The Urban Institute (1994-2009), one of Clare's assignments was serving as Chief of Party for USAID's Decentralization and Local Government Program in Kyrgyzstan (2007-2009).

Over her career, she has conducted research, provided policy advice and managed development programs related to intergovernmental and municipal finance, local economic development, municipal service delivery, land and property management, citizen participation and decentralization.

Clare holds a Master in Public Affairs with a focus on Economics and Public Policy from Princeton University's Woodrow Wilson School of Public and International Affairs.



Sonia Mendoza

Chairman
Mother Earth Foundation

Sonia was awarded the Zero Waste Fellowship in 2002 and completed training on Zero Waste at the Berkeley Ecology Center in Berkeley, California, under the GAIA program.

Mother Earth Foundation (MEF) is a non-stock, non-profit NGO (Non-government Organization) actively engaged in addressing waste and toxic pollution, climate change, and other health and environmental justice issues, and is known for its community-based advocacy of zero waste.

She is a member of the Board of Trustees of GAIA Philippines, the Ecowaste Coalition, Philippines, the Board of Directors of the Zero Waste International Alliance (ZWIA) and the Break Free From Plastic Movement (BFFP). She serves as a resource person on Ecological Solid Waste Management/Zero Waste to local government units, schools, business offices, church organizations, civic organizations and in congressional hearings on solid waste management and environment concerns.

She has assisted different communities in their waste management programs and actively campaigns for ecological waste management to local government units, schools, business establishments, emphasizing waste reduction, change in lifestyle, source segregation, composting, and recycling to conserve our finite resources for the future generation, and to protect public health and the environment. She has helped establish zero waste model communities in the Philippines.

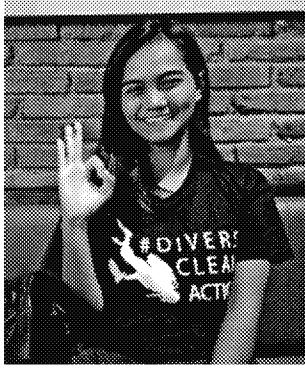


Nguyen Thi Hoai Linh

Country Manager
Environmental Development Action in the Third World (EDNA), Viet Nam

Under Nguyen Thi Hoai Linh's portfolio, she is planning, coordinating and managing the work of EDNA Vietnam on sustainable development, urbanization, natural resources management, gender, climate change, and community development fund.

She has worked with UN-ESCAP, European Commission, I-NGOs, and the private sectors in Asian countries on the initiatives on "waste to resources". Currently, she manages projects related to plastic waste under the support of USAID: "Towards a Higher Effectiveness (THE) of the INFORMAL SECTOR of waste pickers in (i) the MSWM and (ii) increased recycling of valuable waste components with a focus ON PLASTICS, achieved by increased social protection and income for Independent Waste Collectors" and Gender on solid waste management among Ho Chi Minh City. Throughout her professional career, she has taken leading roles in forums and initiatives, and has conceptualized projects and initiatives and fundraised to implement activities in the areas of her work.

**Swietenia Puspa Lestari**

Founder & Executive Director
Divers Clean Action

Swietenia Puspa Lestari is the Executive Director of Divers Clean Action, which is a youth-led organization focusing on marine debris issue. Divers Clean Action (DCA) has been established since 2015; with the main programs being research, community development, campaign, workshops, and EPR collaboration partners. DCA has been working with 8 energized and multi-sector youth, and 1,500 volunteers across South East Asian Countries to develop small islands and coastal areas to have an integrated waste management system so the waste that goes to the ocean can be decreased. Swietenia graduated from environmental engineering major in Bandung Institute of Technology and works together with her university, LIPI (Indonesian Institute of Science), as well as Padjajaran University, local-national governments, and various private sectors. Divers Clean Action first pilot project area in Kepulauan Seribu is monitored by the government to become a model to integrate waste management system in municipal and tourism sector.

APEC Marine Debris Meeting November 2 - 3, 2018

<u>Organization</u>	<u>Name</u>	<u>Title</u>
American Chemistry Council	Charles Stewart Harris	Director, Marine and Environmental Stewardship
AIT Kaohsiung Branch Office	Suzanne Yueh Wong	Deputy Branch Chief
ANCORS, University of Wollongong	Alistair McIlgorm	Professor
ANCORS, University of Wollongong	Daniel Earl McIlgorm	Mr
ANCORS, University of Wollongong, Australia	Dr Karen Raubenheimer	Lecturer
Asian Institute of Technology	Guilberto Borongan	Senior Programme Specialist
BINTARI	Feri Prihantoro	Mr
C&M International	Ryan Cousteau MacFarlane	Director
Center for Environment and Community Research	Nguyen Ngoc Ly	Ms.
Center for Marine Research, MMAF	Dr. Devi Dwiyanti	Researcher on Environment Management
Center for Marine Research, MMAF	Semeidi Husrin	Researcher on Applied Oceanography
Chinese Taipei	Hsiao-Yi Chen	Executive Officer, Department of Marine Resources, Ocean Affairs Council
Chinese Taipei	Zih-Hia Li	Section Chief , Department of International Development, Ocean Affairs Council
Chinese Taipei	Hui-Chen Yang	Executive Officer, Division of Planning, Ocean Conservation Administration, Ocean Affairs Council
Conservation and Environment Protection Authority	Veari Kula	Mr
Danone Indonesia	Karyanto Wibowo	Director Sustainability Danone Indonesia
Department of Marine and Coastal Resources, Thailand	Mrs. Pimwhalan Chueapudee	Marine Biologist
Development Innovations Group	Bryan Simpson Winston	Grants Manager
Directorate General of Marine Spatial Planning, MMAF	Sapta Putra	Deputy Director for Coastal Restoration

Divers Clean Action	Amrullah Rosadi	Outreach Specialist
Divers Clean Action	Swietenia Puspa Lestari	Executive Director
Enda Vietnam	Nguyen Thi Hoai Linh	Mrs
ExxonMobil	Leslie J. Hushka	Senior Sustainability Advisor
Full Cycle	Robert Allen	Mr
Gone Adventurin	Sumangali Krishnan	Head of Research
Gringgo Trash Tech	Febriadi Pratama Putra	co-founder
Gringgo Trash Tech	I Made Wisakananda Pradipta	Collection Center Manager
INAPLAS, Ministry of Industry, ITB	A. Zainal Abidin	Mr.
Indonesia	A. Rita Tisiana Dwi Kuswardani	Female, Dr.
Indonesia	Hendi Koeshandoko	Male, Magister Management
Indonesia	Rita Octafiani	Female, Master Degree on Public Policy
Indonesian Plastic Recycling Association (ADUPI)	Christine Halim	Chairperson, ADUPI
Indonesian Plastic Recycling Association (ADUPI)	Felicita Natalia Sathrieyanti	Deputy Chairperson
Japan	Sumire Saito	Assistant manager
Ministry of Production of Perú	Sharon Dale González	
Ministry of the Environment, Japan	Kazuki Fukui	Deputy Director, Office of Marine Management, Water Environment Division, Environmental Management Bureau
Ministry of the Environment, Japan	Keisuke Takahashi	Deputy Director, International Strategy Division, Global Environmental Bureau
Ministry of the Environment, Japan	Ryuzo Sugimoto	Director, International Cooperation and Sustainable Infrastructure office, Global Environmental Bureau
Misool Foundation	Hery Yusamandra	Program Director
Mother Earth Foundation	Sonia S. Mendoza	Ms.
Municipal Waste Recycling Program	Henri Marius Leonard Vincent Disselkoen	Chief of Party
MWRP USAID	Widita Vidyaningrum	Ms
National Solid Waste Management Commission	Crispian Ng Lao	Vice Chairman

Nestle S.A.	Patricia Camille Rabat	Regional Plastics Sustainability Lead, Asia, Oceania and Sub-saharan Africa
Ocean Conservancy	Chever Xena Voltmer	Director, Plastic Initiatives
Ocean Conservancy	Keondra bills freemyn	International Government Relations Manager
Ocean Conservancy	Sage Cassina Melcer	Research Analyst
Pacific Geographical Institute FEB RAS (Far Eastern Branch of Russian Academy of Sciences), Northwest Pacific Action Plan (NOWPAP)	Nikolai Kozlovskii	Mr
Pacific Scientific Research Fisheries Center (TINRO-Center)	Elena Kondratyeva	Ms
Packaging and Recycling Association for Indonesia Sustainable Environment (PRAISE)	Mignonne N. B. Maramis	Secretary General
Plastic Energy	Andrew Bassford	Asia representative
Plastic Industry Club, The Federation of Thai Industries	PARADORN CHULAJATA	Chairman
Plastic Industry Club, The Federation of Thailand Industries	MR. PARADORN CHULAJATA	Chairman
Pollution Control Department	Ms.Pornsri Suthanaruk	Director of Water Quality Management Bureau
PT Chandra Asri Petrochemical Tbk/ INAPLAS	Edi Rivai	General Manager
PT Nestle Indonesia	amelina novianti	Corporate Affairs Manager
PT Nestle Indonesia	Faiza Anindita	Creating Shared Value Executive
Republic of Korea	Yunil Kim	Mr.
SecondMuse	Simon Baldwin	Director
Sustainable Coastlines Charitable Trust	Camden Edward Howitt	Co-founder and Coastlines Lead
Tetra Pak Indonesia	Reza Andreanto	Environment Manager
The Dow Chemical Company	Haley A Lowry	Global Sustainability and End Use Marketing Director
The Dow Chemical Company	Han Zhang	Sustainability & Advocacy Leader
The World Bank	Delphine Arri	Senior Environmental Engineer

U.S. Department of State	Nathaniel F. Ausitn	Environment Officer, U.S. Embassy Jakarta
U.S. Environmental Protection Agency	Andrew Horan	International Environmental Protection Specialist
U.S. NOAA	Stephen Morrison	International Affairs Specialist
United States	Min Kang	Project Overseer
University of Georgia	Jenna Jambeck	Associate Professor
US Embassy	Elizabeth Wharton	Unit Chief, Environment, Science, Technology and Health, US Embassy
US Environmental Protection Agency	Krystal G. Krejcik	Life Scientist
USAID	Clare Romanik	Senior Urban Specialist
Veolia	Tian Phan BAI	BD Director - Circular Economy
Viet Nam	Mr. Lai The Hung	Directorate of Fisheries
Viet Nam	Tran Van Hung	Viet Nam Administration of Seas and Islands